December 21, 2023

Alachua County DRC
Citizenserve Online Portal Submittal

RE: Paynes Prairie Preserve Modular Office Site Modifications – Cover Sheet

The above project is for the development of the site for a pre-engineered modular office building, and a pre-engineered pole barn on the property located at 3623 SE 35th Street Gainesville, FL 32641 (Parcel ID 16219-000-000, Prop ID 93802). The parcel is 5 acres but only the northern 0.9 acres is part of the project.

On 10-25-23, we attended a Pre-Application meeting with Alachua County.

This is in an unnamed water shed and therefore the required stormwater pond with treat 1.5" of runoff over the site. We have preserved the required 75' wetland buffer from the wetlands located at the northernmost part of the site. The existing impervious is 6500sf and the proposed impervious is 13,500 sf.

The Landscape plan is designed to meet the LDC.

We have coordinated with Tod Harris with the Alachua County Health Dept who will over see the septic tank / drainfield permit and the Limited Use Well Certification for potable water to be handled by the contractor.

Gainesville Regional Utilities will provide a pole mounted transformer to serve the project. The contractor will install a 3" conduit from the based of pole 77656, within the GRU easement, to the site.

We have coordinated with Alachua County Fire and they have submitted a Hauled Water Letter not requiring an onsite tank. We also coordinated an on-site "T" turnaround with Mr. Ware.

Gratefully,

Colby Brown, P.E.
Senior Project Manager

Sign Up for Property Watch

Parcel Summary

Parcel ID	16219-000-000
Prop ID	93802
Location Address	3623 SE 35TH ST GAINESVILLE, FL 32641 ⊞ **See more addresses...**
Neighborhood/Area	315400.00
Subdivision	
Legal Description	PB A-28 COM SE COR SEC W 2646.92 FT N 1336.12 FT E 647.87 FT POB S 95.10 FT S 77 DEG W 51.54 FT S 48 DEG W 321.41 FT N 83 DEG E 273.56 FT S 240.43 FT N 85 DEG E 102.13 FT N 5 DEG W 40.71 FT N 44 DEG E 49.81 FT N 65 DEG E 92.54 FT N 77 DEG E 177.09 FT N 8 (Note: *The Description above is not to be used on legal documents.)
Property Use Code	SINGLE FAMILY (00100)
Sec/Twp/Rng	14-10-20
Tax Area	ST. JOHN'S (0400)
Acres	5
Homesteaded	False

No Image Available

View Map

Millage Rate Value

Millage Rate: 19.3156

Owner Information

BOARD OF TRUSTEES OF THE, INTE
BOT TIIF DEP, DIVISION OF STATE LANDS
3900 COMMONWEALTH BLVD MAIL
STATION 108
TALLAHASSEE, FL 32399-3000

Valuation

	2023 Certified Values	2022 Certified Values	2021 Certified Values	2020 Certified Values	2019 Certified Values
Improvement Value	$104,019	$91,336	$82,199	$82,199	$76,067
Land Value	$30,000	$30,000	$30,000	$30,000	$30,000
Land Agricultural Value	$0	$0	$0	$0	$0
Agricultural (Market) Value	$0	$0	$0	$0	$0
Just (Market) Value	**$134,019**	**$121,336**	**$112,199**	**$112,199**	**$106,067**
Assessed Value	$133,470	$121,336	$112,199	$112,199	$106,067
Exempt Value	$133,470	$121,336	$112,199	$112,199	$106,067
Taxable Value	$0	$0	$0	$0	$0
Maximum Save Our Homes Portability	$549	$0	$0	$0	$0

"Just (Market) Value" description - This is the value established by the Property Appraiser for ad valorem purposes. This value does not represent anticipated selling price.

Land Information

Land Use	Land Use Desc	Acres	Square Feet	Eff. Frontage	Depth	Zoning
0102	SFR/MH	5.00	217800	0	0	A

Building Information

Type	SINGLE FAMILY	**Heat**	ELECTRIC
Total Area	1,411	**HC&V**	FORCED AIR
Heated Area	1,151	**HVAC**	NONE
Exterior Walls	AVERAGE	**Bathrooms**	1.0-Baths
Interior Walls	DRYWALL	**Bedrooms**	3 BEDROOMS
Roofing	ASBESTOS SHING	**Total Rooms**	
Roof Type	GABLE/HIP	**Stories**	1.0
Frame		**Actual Year Built**	1937
Floor Cover	CARPET; PINE/SOFT WOOD	**Effective Year Built**	1974

Type	MH POST 1977	**Heat**	GAS
Total Area	832	**HC&V**	FORCED AIR
Heated Area	660	**HVAC**	NONE
Exterior Walls	PRE-FINSH METL	**Bathrooms**	1.0-Baths
Interior Walls	PANEL	**Bedrooms**	2 BEDROOMS
Roofing	MODULAR METAL	**Total Rooms**	
Roof Type	FLAT	**Stories**	1.0
Frame		**Actual Year Built**	1975
Floor Cover	CARPET; SHEET VINYL	**Effective Year Built**	1975

Type	SOH MISC	**Heat**	
Total Area	18,186	**HC&V**	
Heated Area		**HVAC**	
Exterior Walls		**Bathrooms**	
Interior Walls		**Bedrooms**	
Roofing		**Total Rooms**	
Roof Type		**Stories**	1.0
Frame		**Actual Year Built**	0
Floor Cover		**Effective Year Built**	1985

Sub Area

Type	Description	Sq. Footage	Quality	Imprv Use	Imprv Use Descr
BAS	BASE AREA	1,151	3	0100	SINGLE FAMILY
FDU	FINISHED DET UTILITY	260	3	0100	SINGLE FAMILY

Type	Description	Sq. Footage	Quality	Imprv Use	Imprv Use Descr
BAS	BASE AREA	660	3	0800	MH POST 1977
FAT	FINISHED ATTIC	72	3	0800	MH POST 1977
FAT	FINISHED ATTIC	100	3	0800	MH POST 1977

Type	Description	Sq. Footage	Quality	Imprv Use	Imprv Use Descr
0645	COURT T	6,600		R5	RES
0661	CP 1	728		R2	RES
0661	CP 1	392		R2	RES
1601	OP 1	72		R5	RES
1641	PATIO 1	460		R1	RES
1680	PAVING 1	7,200		R1	RES
1762	POOL 2	450		R3	RES
2022	SHED 2	950		R2	RES
2041	SHOP 1	560		R2	RES
2121	SP 1	100		R2	RES
2221	STG 1	672		R2	RES
2420	WELL/SEPT	1		R5	RES
2480	WOOD STOVE	1		R7	RES

Sales

Sale Date	Sale Price	Instrument	Book	Page	Qualification	Vacant/Improved	Grantor	Grantee	Link to Official Records
8/24/2015	$0	QD	4383	2096	Unqualified (U)	Improved	* MACKENZIE RICHARD S LIFE EST	BOARD OF TRUSTEES OF THE INTER	Link (Clerk)
11/23/1999	$359,000	WD	2265	410	Unqualified (U)	Improved	* MACKENZIE RICHARD S CLAIRE S	* MACKENZIE RICHARD S LIFE EST	Link (Clerk)

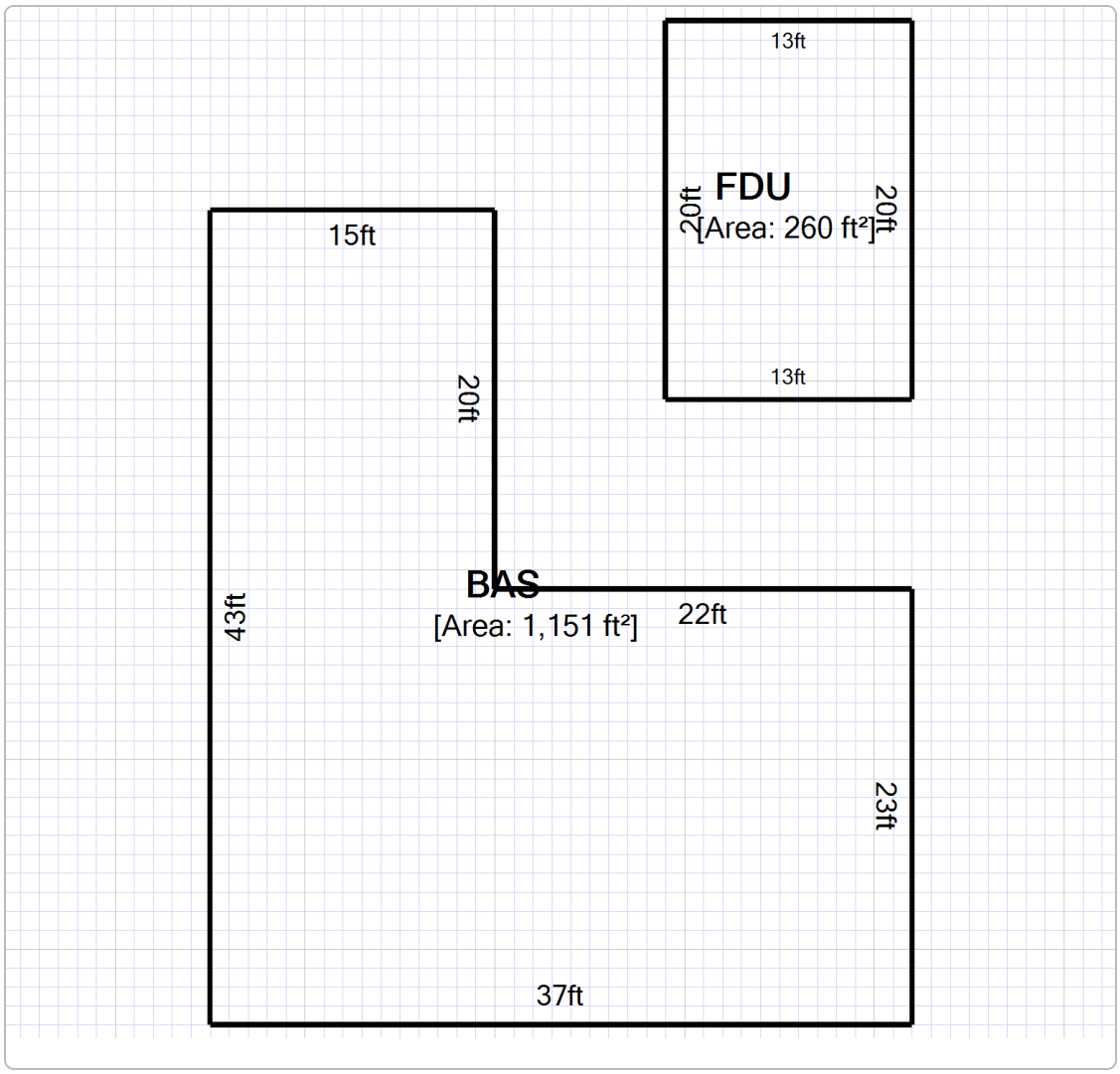
Official Public Records information is provided by the Alachua County Clerk's Office. Clicking on these links will direct you to their web site displaying the document details for this specific transaction.

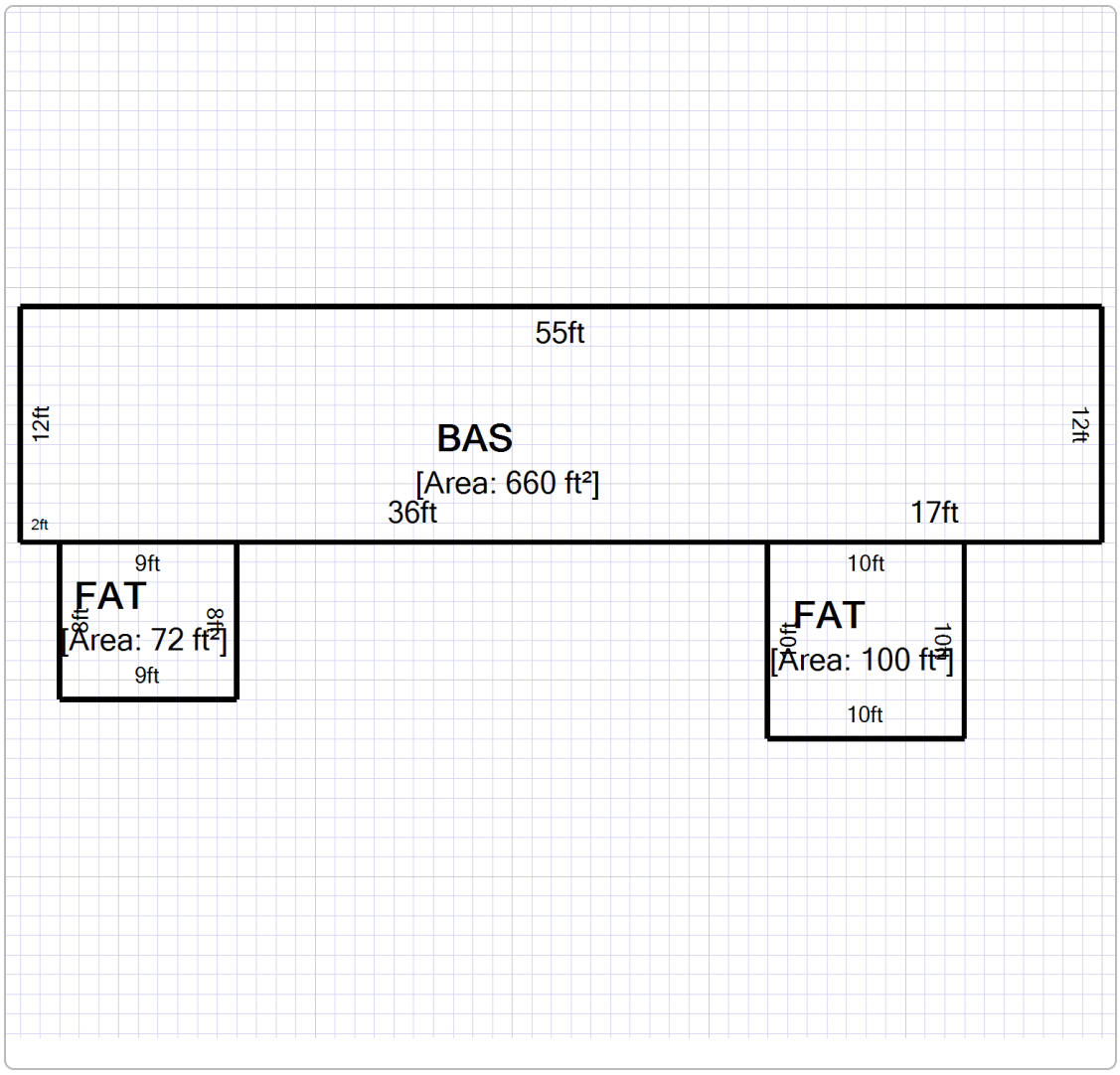
Permits

Permit Number	Type	Primary	Active	Issue Date	Value
2020020270	ROOFING	Yes	No	2/13/2020	$15,550

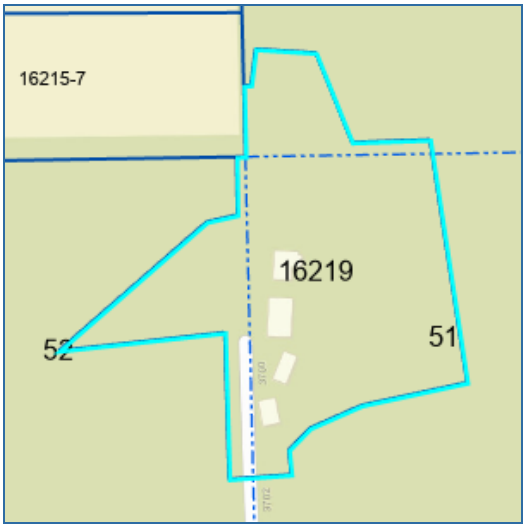
Our permitting information is pulled from the Alachua County Permitting Offices. Permitting information shown here is all the Property Appraiser has on file for this property. Any detailed questions about permits should be directed to the Permitting Offices.

Sketches


13ft
FDU
[Area: 260 ft²]
20ft
20ft
13ft
15ft
20ft
BAS
[Area: 1,151 ft²]
22ft
43ft
23ft
37ft



Map



No data available for the following modules: TRIM Notice, Extra Features, Photos.

Alachua County
Department of Growth Management
10 SW 2nd Ave., Gainesville, Fl 32601
Tel. 352.374.5249, Fax. 352.338.3224
http://growth-management.alachuacounty.us

Submit Application to:
Development Services Division

PROPERTY OWNERS' AFFIDAVIT FOR DEVELOPMENT PLAN REVIEW

Owner: Florida Department of Environmental Protection Project #_____

Additional Owners: _____

Appointed Agent(s): Colby Brown, PE - Greenman-Pedersen, Inc

Parcel Number(s): 16219-000-000, 16219-002-000, _____, _____, _____, _____, _____

Section 14 Township 10 Range 20 Address: 3623 SE 35th Street, Gainesville, FL 32641

Description of Request: Allow Colby Brown to serve as the agent for the Paynes Prairie Preserve Modular Office Site Modifications

I (we), the property owner(s) of the subject property, being duly sworn, depose and say the following:

1. That I am (we are) the owner(s) and record title holder(s) of the property described in the attached application;
2. That this property constitutes the property for which the above noted development plan review request is being made to Alachua County;
3. That I (we), the undersigned, have appointed, and do appoint, the above noted person(s) as my (our) agent(s) to execute any agreement(s), and other documents necessary to effectuate such agreement(s) in the process of pursuing the aforementioned development plan review request;
4. That I (we), the undersigned shall make available to Alachua county staff a means of reasonable access to the property for which an application has been submitted.
5. That this affidavit has been executed to induce Alachua County to consider and act on the subject request;
6. That I (we), the undersigned authority, hereby certify that the foregoing statements are true and correct.

Owner (signature)	Owner (signature)	Owner (signature)
MICHAEL FOSTER		
Owner (print name)	Owner (print name)	Owner (print name)

STATE OF FLORIDA
COUNTY OF ALACHUA

SWORN AND SUBSCRIBED BEFORE ME
THIS 13th DAY OF December, 2023
BY Michael Foster
WHO IS/ARE PERSONALLY KNOWN TO ME OR HAS/HAVE PRODUCED AS IDENTIFICATION
_____
(TYPE OF IDENTIFICATION)

WILEEN FOOTMAN NOTARY PUBLIC MY COMMISSION EXPIRES 12-12-2026 STATE OF FLORIDA COMMISSION NUMBER HH 300444

(SEAL ABOVE)

_____
Notary Public, Commission No. _____
(Name of Notary typed, printed, or stamped)

Form revised December 17, 2015. Form is located at: http://growth-management.alachuacounty.us/formsdocs/DR_Affidavit_Owners.pdf

Alachua County
Department of Growth Management
10 SW 2nd Avenue, Gainesville, FL 32601
Telephone (352) 374-5249
Alachua County Growth Management Website

Submit Affidavit to:
Development Services Division
Development Review Email

POSTED NOTICE AFFIDAVIT FOR DEVELOPMENT PLAN REVIEW

PROJECT NAME: Paynes Prairie Preserve Modular Office Site Modifications

OWNER(s): Florida Department of Environmental Protection

APPOINTED AGENT: Colby Brown, PE - Greenman-Pedersen, Inc

PARCEL NUMBER(s): 16219-000-000 / 16219-002-000

APPROXIMATE PROJECT ADDRESS: 3623 SE 35th Street, Gainesville, FL 32641

I, the property owner or designated agent representative of the subject property, being duly sworn, depose and say the following:

1. *That I am the owner and record title holder of the property described in the attached application; and*
2. *That this affidavit serve as posting of the "Notice of Development Application Sign(s) which describes the nature of the development request, the name of the project, and the telephone numbers where additional information can be obtained. In addition, the applicant has securely posted the sign(s) on the property along each street frontage, at intervals of not more than four hundred (400) feet for properties within the Urban Cluster and maximum intervals of 1,320 feet for properties outside of the Urban Cluster, and set back no more than five (5) feet from the street and visible from the street. If the property does not abut a public right-of-way, signs have been placed at the nearest public right-of-way with an indication of the location of the subject property.*
3. *It is also agreed that the applicant shall maintain the signs(s) as provided above until the conclusion of the development review and approval process and that the signs shall be removed within ten (10) days after the final action has been taken on the development application*
4. *That I, the undersigned authority, hereby certify that the foregoing statements are true and correct.*

[signature] Agent or Owner David Matson/FDEP, BOC - Assistant Bureau Chief Agent or Owner
Signature *Printed Name*

The foregoing instrument was acknowledged before me by means of [X] physical presence [ ] online notarization, this

4th Day of January, 2024, by David Matson who is

[X] personally known or [ ] has provided satisfactory identification _____.

STATE OF FLORIDA

COUNTY OF Leon

WILEEN FOOTMAN NOTARY PUBLIC MY COMMISSION EXPIRES 12-12-2026 STATE OF FLORIDA COMMISSION NUMBER HH 300444

(Notarial Stamp above)

[signature] Signature of Notary Public

Wileen Footman Printed Name of Notary Public

December 12, 2026 Notary Commission Number

Alachua County
Department of Growth Management
10 SW 2nd Avenue, Gainesville, FL 32601
Telephone (352) 374-5249
Alachua County Growth Management Website

Submit Affidavit to:
Development Services Division
Development Review Email

REQUIREMENTS FOR POSTED NOTICE

Unified Land Development Code Section §402.16

(a) *Content of notice.* When required, as shown in Table 402.12.1, posted notices shall include the following information clearly written on the sign:

1. The type of application, visible from the street.
2. Description of proposal or request;
3. Zoning districts and future land use designations for comprehensive plan amendments and zoning applications (zoning districts shall be spelled out, not abbreviated, and applicable densities shall be included with land use designations); and
4. A phone number to contact the Department for additional information.
5. Applicant or agent name and a phone number to contact.

(b) *Posting of notice.* Posting of property shall comply with the requirements listed below.

1. *Responsibility for posting.* Signs shall be posted by the applicant.
2. *Form of required signs.* Notice shall be posted on weather resistant signs in a form established by the department.

(c) *Timing of posted notice.* For any application requiring posted notice, signs shall be posted within 48 hours after the application has been accepted for review by the Department.

(d) *Location of signs.*

1. *Street frontage.* Signs shall be placed along each street at maximum intervals of four hundred (400) feet for properties within the urban cluster and maximum intervals of one thousand three hundred twenty (1,320) feet for properties outside of the urban cluster. They shall be set back a maximum of five (5) feet from the property line so that the signs are visible from the street.
2. *Lack of street frontage.* If the land does not have frontage on a street, at least one (1) sign shall be placed on the property at the access point and additional signs shall be placed on the nearest public right-of-way with an indication of the location of the subject property.
3. *Additional Locations.* Additional signs with specific locations as required by the Director, or their designee.
4. *Installation.* Signs shall be posted in a professional manner, able to withstand normal weather events.

(e) *Affidavit.* A notarized affidavit shall be submitted to the department within seventy-two *(72) hours* after the posting, certifying that the signs were posted in compliance with the standards of this section. Applications will not be considered complete until the notarized posted notice affidavit has been received. The Director, or their designee, may require submittal of photographs of all signs as part of the affidavit.

(f) *Maintenance.* The applicant shall ensure that the signs are maintained on the land until completion of the final action on the application.

(g) *Removal.* The applicant shall remove the sign within ten (10) days after final action on the application.

From: Jacob Stout <jstout@alachuacounty.us>
Sent: Monday, December 11, 2023 3:27 PM
To: Colby Brown
Cc: Leslie McLendon; Christine A. Berish; Sahmira Curi
Subject: RE: Paynes Prairie State Park - Americorps Modular Office

Good afternoon Colby,

I have some follow up answers after speaking with you this morning.

Level of Review – Combined Preliminary and Final Development Plan. The fee ($2400) is half off because this property is in the Urban Cluster on the East Side. An additional fee for "fee over 10 acres" **will not** be applied. I will make sure that we send an Appointment to Submit to you when we request future projects in the next couple of weeks.

Notification of Minor I vs full Insufficiency Report – we anticipate that the scope of this project will not require multiple reviews if you take care to meet sections of our code that are unique compared to other jurisdictions (i.e., stormwater, stormwater treatment, landscaping). Feel free to call or email me on Jan 17 and I'll be able to give you an idea of the status.

A tree mitigation report and the environmental resource assessment are not required. The Paynes Prairie master plan and wetland boundary flagged by SJRWMD is sufficient to account for the resources.

Please let me know if you have any additional questions.

Thanks,

Jacob Stout
Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 ext. 2320 (office) • 352-338-3224 (fax)

From: Sahmira Curi <scuri@alachuacounty.us>
Sent: Monday, December 11, 2023 9:44 AM
To: Colby Brown <colbybrown@gpinet.com>; Leslie McLendon <LMcLendon@alachuacounty.us>; developmentreview <developmentreview@alachuacounty.us>
Subject: RE: Paynes Prairie State Park - Americorps Modular Office

Good morning,

Please see the attached PDF for both the requested forms.

Feel free to reach out with any questions!

Sahmira Curi

Alachua County, Board of County Commissioners
Department of Growth Management
10 SW 2nd Ave., Gainesville, Fl 32601
Tel. 352.374.5249, Fax. 352.338.3224
http://growth-management.alachuacounty.us

Submit to:
Development Services Division

ENVIRONMENTAL RESOURCES ASSESSMENT CHECKLIST

Pursuant to Alachua County Comprehensive Plan 2002, as amended, Conservation Open Space Element Policy 3.4.1, applications for land use change, zoning change, and development approval shall be required to submit an inventory of natural resource information. The inventory shall include site specific identification, analysis and mapping of each resource present on or adjacent to the site. The identification and analysis shall indicate information sources consulted.

Natural Resources Checklist:

Check "Yes" for each resource or resource characteristic identified and discuss and provide supporting material.
Check "N/A" for each resource or resource characteristic not present or otherwise relevant to the application.

Yes	☑	N/A	☐	Surface Waters (ponds, lakes, streams, springs, etc.)
Yes	☑	N/A	☐	Wetlands
Yes	☑	N/A	☐	Surface Water or Wetland Buffers
Yes	☐	N/A	☑	Floodplains (100-year)
Yes	☐	N/A	☑	Special Area Study Resource Protection Areas (Cross Creek, Idylwild/Serenola, etc)
Yes	☐	N/A	☑	Strategic Ecosystems (within or adjacent to mapped areas)
Yes	☐	N/A	☑	Significant Habitat (biologically diverse natural areas)
Yes	☐	N/A	☑	Listed Species/Listed Species Habitats (FNAI S1, S2, & S3; State or Federally E, T, SSC)
Yes	☐	N/A	☑	Recreation/Conservation/Preservation Lands
Yes	☐	N/A	☑	Significant Geological Features (caves, springs, sinkholes, etc.)
Yes	☐	N/A	☑	High Aquifer Recharge Areas
Yes	☐	N/A	☑	Wellfield Protection Areas
Yes	☑	N/A	☐	Wells
Yes	☑	N/A	☐	Soils
Yes	☐	N/A	☑	Mineral Resource Areas
Yes	☐	N/A	☑	Topography/Steep Slopes
Yes	☐	N/A	☑	Historical and Paleontological Resources
Yes	☐	N/A	☑	Hazardous Materials Storage Facilities
Yes	☐	N/A	☑	Contamination (soil, surface water, ground water)

SIGNED: Colby Brown _____ **PROJECT #**_____ **DATE:**_____

For assistance please visit the Alachua County Environmental Protection Department (ACEPD) website at http://www.alachuacounty.us/government/depts/epd/natural/devchecklist.aspx or contact ACEPD at (352) 264-6800.
(version 5/20/05)

From: Jacob Stout <jstout@alachuacounty.us>
Sent: Monday, December 11, 2023 3:27 PM
To: Colby Brown
Cc: Leslie McLendon; Christine A. Berish; Sahmira Curi
Subject: RE: Paynes Prairie State Park - Americorps Modular Office

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I have some follow up answers after speaking with you this morning.

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Notification of Minor I vs full Insufficiency Report – we anticipate that the scope of this project will not require multiple reviews if you take care to meet sections of our code that are unique compared to other jurisdictions (i.e., stormwater, stormwater treatment, landscaping). Feel free to call or email me on Jan 17 and I'll be able to give you an idea of the status.

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Please let me know if you have any additional questions.

Thanks,

Jacob Stout
Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
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From: Sahmira Curi <scuri@alachuacounty.us>
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Subject: RE: Paynes Prairie State Park - Americorps Modular Office

Good morning,

Please see the attached PDF for both the requested forms.

Feel free to reach out with any questions!

Sahmira Curi

Sahmira Curi
Planning Assistant
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 (office)

From: Colby Brown <colbybrown@gpinet.com>
Sent: Friday, December 8, 2023 4:20 PM
To: Leslie McLendon <LMcLendon@alachuacounty.us>; developmentreview <developmentreview@alachuacounty.us>
Subject: RE: Paynes Prairie State Park - Americorps Modular Office

Can you also send me the Development Review application form and owner authorization to submit form?

Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Leslie McLendon <LMcLendon@alachuacounty.us>
Sent: Friday, December 8, 2023 8:47 AM
To: Colby Brown <colbybrown@gpinet.com>; developmentreview <developmentreview@alachuacounty.us>
Subject: RE: Paynes Prairie State Park - Americorps Modular Office

Good morning,

Here is the link to the Development Review Checklist:
https://growth-management.alachuacounty.us/formsdocs/DR_CHECKLIST_ADA.pdf

Let us know if you have any other questions.

Thank you,
Leslie

Leslie McLendon, AICP
Senior Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 (office)

From: Colby Brown <colbybrown@gpinet.com>
Sent: Friday, December 8, 2023 9:00 AM
To: developmentreview <developmentreview@alachuacounty.us>
Subject: Paynes Prairie State Park - Americorps Modular Office

Please send me the checklist for a DRC Submittals

Colby Brown, P.E.
Senior Project Manager

4300 Bayou Boulevard, Suite 12, Pensacola, FL 32503
d 850.297.2929 | c 850.450.2921
colbybrown@gpinet.com | www.gpinet.com

GPI Engineering | Design | Planning | Construction Inspection

Greenman-Pedersen, Inc.
An Equal Opportunity Employer

AREHNA | Engineering, Inc.

REPORT OF GEOTECHNICAL EXPLORATION

PAYNE'S PRAIRIE
GAINESVILLE, FLORIDA

AREHNA PROJECT NO. B-21-066

OCTOBER 4, 2021

Prepared For:
Greenman-Pedersen, Inc.
1590 Village Square Boulevard
Tallahassee, Florida 32309

Prepared By:
AREHNA Engineering, Inc.
5012 West Lemon Street
Tampa, Florida 33609

AREHNA | Engineering, Inc.

5012 West Lemon Street
Tampa, Florida 33609
Ph 813.944.3464 | Fax 813.944.4959

October 4, 2021

Mr. Tim Stackhouse, P.E.
Greenman-Pedersen, Inc.
1590 Village Square Boulevard
Tallahassee, Florida 32309

E-mail: TStackhouse@gpinet.com

Subject: **Report of Geotechnical Exploration**
Payne's Prairie – Geotechnical Services
3623 SE 35th Street
Gainesville, Florida
AREHNA Project B-21-063

Dear Mr. Stackhouse,

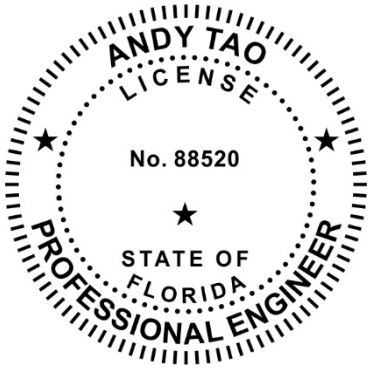
AREHNA Engineering, Inc. (AREHNA) is pleased to submit this report of our geotechnical exploration for the proposed project. Services were conducted in general accordance with AREHNA Proposal B.Prop-21-104, submitted April 23, 2021. The purpose of our geotechnical study was to obtain information on the general subsurface conditions for the proposed modular office building, pole barn, and treatment swale.

This report presents our understanding of the project, outlines our exploratory procedures, documents the field data obtained and includes our recommendations for site preparation and foundation design.

AREHNA appreciates the opportunity to have assisted Greenman-Pedersen, Inc. on this project. Should you have any questions with regards to this report, or if we can be of any further assistance, please contact this office.

Best Regards,
AREHNA ENGINEERING, INC.
FLORIDA BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION NO. 28410

Kristina LaCava, P.E.
Senior Geotechnical Engineer



This item has been digitally signed and sealed by:

Andy Tao, P.E.
Geotechnical Engineer
Florida Registration 88520
On the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Distribution: 1 – Addressee - Electronic
1 – File

TABLE OF CONTENTS

Page

LIST OF APPENDICES

APPENDIX

1.0 PROJECT INFORMATION AND SCOPE OF WORK

1.1 SITE DESCRIPTION AND PROJECT CHARACTERISTICS

The project site is located at 3623 SE 35th Street in Gainesville, Florida (Parcel ID 16219-000-000). Based on e-mail communications dated April 22, 2021, we understand the proposed construction for the site includes two buildings (modular office building and a pole barn), drainage swale, and a new septic drain field. The boring locations were provided by the client.

Based on the provided structural plans the column loads will not exceed 8 kips. We also assumed that less than two feet of fill and no appreciable cut will be needed to achieve the planned building grades.

1.2 SCOPE OF WORK

The purpose of our geotechnical study was to obtain information on the general subsurface conditions at the proposed project site. The subsurface materials encountered were evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.
- General location and description of potentially deleterious materials encountered in the borings which may have an impact on the proposed construction.
- Allowable capacities and foundation settlement for foundations supporting the building.
- Field vertical permeability results using Double Ring Infiltration (DRI) testing. Horizontal permeability values will be estimated based on the vertical permeability results.
- General site preparation recommendations.

The following services were performed to achieve the above-outlined objectives:

- Requested utility location services from Sunshine811.
- Performed two Standard Penetration (SPT) borings to depths of 20 feet. Samples were collected, and Standard Penetration Test resistances measured at approximate intervals of two feet for the top ten feet and at approximate intervals of five feet thereafter. The boreholes were backfilled with soil cuttings and bentonite chips upon completion.
- Performed two Double Ring Infiltration (DRI) tests at approximate depths of two feet within the proposed swale and determined the seasonal high ground water level.
- Performed two hand auger borings to depths of five feet within the proposed swale adjacent to the DRI locations.

- Visually classified and stratified soil samples in the laboratory using the Unified Soil Classification System (USCS) and conducted a laboratory testing program on selected representative samples.
- Reported the results of the field exploration and engineering analysis. The results of the subsurface exploration are presented in this report, signed and sealed by a professional engineer specializing in geotechnical engineering.

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1 FIELD EXPLORATION

Our scope of work included two SPT borings extending to depths of approximately 20 feet below the existing ground surface and two Double Ring Infiltration (DRI) tests. A hand auger boring was performed adjacent to each DRI location to approximate depths of 5 feet below the existing ground surface, at the time of our field exploration.

The SPT borings were performed with the use of a Power Drill Rig using Bentonite "Mud" drilling procedures. Samples were collected and Standard Penetration Test resistances were measured continuously for the top ten feet and at approximate intervals of five feet thereafter. The upper four feet was manually hand augered to avoid any potential conflict with unmarked underground utilities. The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils."

The hand auger borings were performed by manually advancing a 3-inch diameter, 6-inch-long sampler into the soil until the sampler was full. The sampler was then retrieved and the soils in the sampler were removed and visually classified. The soil sampling was performed in general accordance with ASTM Test Designation D-1452, entitled "Soil Investigation and Sampling by Auger Borings." The boreholes were backfilled after the borings were completed.

The Double Ring Infiltration (DRI) tests (DRI-01 and DRI-02) were performed within the proposed treatment swale area by installing a 12-inch diameter inner steel ring and a 24-inch diameter outer steel ring concentrically into the ground to the desired test depth within excavated areas about 2 feet deep (test depth of 2 feet). Water was then added to a desired level in both rings and held constant. The amount of water added to the inner ring versus time was then recorded. This procedure was repeated every 15 minutes for the first hour and every 30 minutes for ensuing hours for a total of 4 hours or until a stabilized infiltration rate was achieved. The DRI test was performed in general accordance with ASTM D-3385, entitled "Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer." The results of the DRI's and other information gathered at the proposed treatment swale location is presented in the **Appendix** of this report.

Representative portions of these soil samples were sealed in glass jars, labeled and transferred to AREHNA's Tampa Office for appropriate classification.

The **Boring Location Plan** in the **Appendix** provides a boring location site plan showing the relationship of existing features to the borings. The borings were located in the field by measuring from existing features and using GPS coordinates.

2.2 LABORATORY TESTING

Laboratory testing consisting of natural moisture content, Atterberg limits, and single sieve (#200) gradation was performed on representative samples from the soil borings. The results of the laboratory testing are presented on **Table 1** in the **Appendix** . Lab results are also shown alongside the Soil Boring Profiles in the **Appendix**.

3.0 SUBSURFACE CONDITIONS

3.1 USGS TOPOGRAPHIC DATA

The topographic survey map published by the United States Geological Survey was reviewed for ground surface features at the proposed project location (**Appendix**). Based on this review, the natural ground surface elevations at the project site are approximately +105 to +115 feet National Geodetic Vertical Datum of 1929 (NGVD).

3.2 USDA NATURAL RESOURCES CONSERVATION SERVICE DATA

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) survey for Alachua County indicates that the soils at the project site consist of the following soil units:

Table 3.2.1 Summary of USDA Soil Survey

Soil Unit Number	Soil Name	Depth Below Natural Grade to High Water Table (feet)
8	Millhopper sand, 0 to 5 percent slopes	3.5 – 6.0
33	Norfolk loamy fine sand, 2 to 5 percent slopes	4.0 – 6.0

The soil survey also indicates that the average annual precipitation is 44 to 58 inches. The USDA Soil Survey map for the project site is attached in the **Appendix**.

3.3 SUBSURFACE CONDITIONS

A pictorial representation of the subsurface conditions encountered in the borings is shown on the Boring Profiles in the **Appendix**. These profiles and the following soil conditions highlight the general subsurface stratification. When reviewing the boring records and the subsurface soil profiles, it should be understood that soil conditions may vary between, and away from, boring locations.

Boring SPT-01 encountered firm to hard silts (MH) and clays (CH) from the existing ground surface to termination depth of approximately 20 feet below existing grade with SPT resistance values (N-values) ranging from 4 to 16 blows per foot (bpf). Cemented sand fragments were encountered between about 2 and 4 feet below existing ground surface.

Boring SPT-02 encountered loose to medium dense silty fine sand (SM) from the existing ground surface to a depth of 13 feet. Underlying the sand layer, stiff to very stiff clay, with N-values ranging from 9 to 28 bpf, was encountered to the termination depth of 20 feet below existing ground surface.

The hand auger borings generally encountered sand (SP) from the existing ground surface to the termination depths of 5 feet below existing ground surface.

3.4 GROUNDWATER CONDITIONS

The groundwater level was not encountered in the SPT borings. Drilling fluid was utilized in the SPT borings to advance the borehole. The addition of drilling fluid makes it difficult to obtain accurate groundwater measurements when the drilling fluid is introduced in the borehole prior to encountering the groundwater table. As a result, GNA (Groundwater Not Apparent) is shown adjacent to the soil profiles where the drilling fluid was introduced prior to encountering the groundwater table.

The groundwater table was encountered at depths of 30 to 48 inches below existing ground surface within the explored depths of the hand auger borings. Fluctuation in ground water levels should be expected due to seasonal climatic changes, construction activity, rainfall variations, surface water runoff, and other site-specific factors. Since groundwater level variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

3.5 ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

Based on the mapping performed by the USDA, soils information obtained from the site and our experience in the area, we estimate that the seasonal high water level will be encountered at approximate depths of 2.0 feet below existing ground surface in the vicinity of DRI-01 and 3.0 feet below the existing ground surface in the vicinity of DRI-02 within the drainage swale area.

Further, it is estimated that the seasonal high groundwater table will be encountered at a depth greater than 5 feet within the building area. It should be noted that clay/silt soils were in encountered in SPT-01 as shallow as at the existing ground surface. These soils have a tendency to perch the groundwater table for a period of time after rainfall events.

4.0 DESIGN RECOMMENDATIONS

4.1 GENERAL

Boring SPT-01 encountered firm to very stiff silty soils (SM/MH) and clayey soils (SC/CH) from the ground surface to termination depths of 20 feet. Although the groundwater level was not encountered in the borings, these soils will tend to perch groundwater/surface water after rainfall events. The silty/clayey soils do not meet the required gradation for backfill.

If surficial silt/clay is encountered within the footprint of the building areas we recommend removing a minimum of 12-inches of this material beneath the concrete slab and replacing with suitable, compacted structural fill. The soils should be removed across the footprint of the proposed building(s) and extending 5 feet beyond the perimeter of the building(s) footprint. If encountered during footing excavation, we recommend these clayey/silty soils be immediately sealed with 2-inches of lean (< 2,000 psi) concrete.

Our geotechnical evaluation is based upon the previously presented project information as well as the field data obtained during this geotechnical exploration. If the final structure locations or foundation loads are significantly different from those described or if the subsurface conditions during construction are different from those revealed by our borings, we should be notified immediately so that we might review our recommendations presented in this report.

After stripping to remove vegetation, root systems, and other deleterious materials, the site should be proofrolled and compacted. Any areas that appear unstable under proofrolling should be replaced with compacted fill. Our recommended site preparation is presented in Section 5.0, General Site Preparation.

4.2 SHALLOW FOUNDATION DESIGN

Following our recommended General Site Preparations, the proposed structures can be constructed on a system of conventional shallow spread or strip footings. The foundation system may bear on compacted acceptable existing soils or compacted structural fill soils. Shallow foundations may be designed using an allowable net soil bearing pressure of 2,500 psf. Our bearing capacity evaluation was based on correlations between N-values and the successful performance of similar structures on similar soil conditions.

All footings should be embedded so that the bottom of the foundation is a minimum of 18 inches below the adjacent compacted grades on all sides. Strip or wall footings should be a minimum of 24 inches wide and pad or column footings should be a minimum of 30 inches wide. These minimum footing sizes should be used regardless of whether the maximum allowable bearing pressures are fully developed in all loading conditions. These minimum footing sizes tend to provide adequate load bearing area to develop overall bearing capacity and account for minor variations in the bearing materials.

4.4 SETTLEMENT

The settlement of shallow foundations supported on the soils present at the site should occur rapidly during construction as dead loads are imposed at the footing locations. Provided that the recommended subsurface preparation operations are properly performed, the total settlements of isolated columns and wall footings should not exceed 1 inch, with differential settlements on the order of 50 percent of the total settlements.

It should be noted that boring SPT-01 encountered silty soils (SM/MH) and clayey soils (SC/CH) from the existing ground surface to an approximate depth of 20 feet. To minimize moisture content changes and softening of the bearing soils, it is recommended that these soils, if encountered during footing excavations, be immediately sealed with 2-inches of lean (< 2,000 psi) concrete.

5.0 GENERAL SITE PREPARATION

5.1 ON-SITE SOIL SUITABILITY

Silty soils (SM/MH) and clayey soils (SC/CH) were encountered within boring SPT-01 from the existing ground surface and extending to the termination depth of 20 feet. This material is not suitable for use as structural fill. If surficial clay is encountered within the footprint of the building areas, we recommend removal of at least 12-inches of this soil and replacing it with suitable structural fill. This should be performed within the proposed footprint and extending out 5 feet beyond the perimeter of the building footprint. Clayey bearing soils encountered in the footing excavations should be sealed with a 2 inch thick layer of lean (< 2,000 psi) concrete to minimize moisture content changes and softening of the bearing soils.

Sandy soils present at the site classified as sand (SP) to depths of 5 feet below existing ground surface are suitable for use as structural fill. Soils classified as clayey sand (SC), silty sand (SM), silt (MH), and clay (CH) are not suitable as structural fill. Soil excavated from below the groundwater level will be above the optimum moisture content required for compaction and will need to be dried before placement. Suitable structural fill materials should consist of fine to medium sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Any off-site materials used as fill should be approved by AREHNA prior to acquisition.

5.2 GENERAL

The initial step in site preparation should be the complete removal of all vegetation, topsoil, root systems, and other deleterious materials from beneath and to a minimum of five feet beyond the development perimeter. Also, prior to construction, the location of any existing foundations, underground irrigation, septic tanks, drainage, or other utility lines within the construction area should be established. In this regard it should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which subsequently may result in excessive settlements. The project areas should then be inspected and thoroughly proofrolled as directed by a Geotechnical Engineer. Our recommendations listed in this section should be used as a guideline for the project general specifications prepared by the Design Engineer:

- The entire site should be proofrolled with a large vibratory roller with a 4 foot diameter drum and a static weight of at least 10 tons. At least 8 complete coverages (4 in each perpendicular direction) should be performed over the entire building areas prior to raising site grades. Proofrolling should continue for the required number of passes and until the soil at a depth of 12 inches below the compaction surface has attained a minimum of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). Careful observations should be made during proofrolling to help identify any areas of soft-yielding soils that may require over excavation and replacement.

- Following satisfactory completion of proofrolling, additional fill can be placed and compacted as needed to achieve the desired grades. Fill should generally consist of dry fine sand with less than 12 percent passing the No. 200 sieve, free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition.

- Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). The upper foot of pavement subgrade should be compacted to at least 98 percent of Modified Proctor. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

- Prior to beginning compaction, soil moisture contents should be adjusted in order to facilitate proper compaction. A moisture content within 2 percentage points of the optimum indicated by the Modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

- If silt (MH) or clayey soils (SC/CH) are found at the planned footing bearing depths, the excavations should immediately be sealed with two inches of lean (< 2,000 psi) concrete placed in the footing bottoms. If sand (SP) or silty sand (SM) is found at the footing bearing level, it should be compacted to 95% of ASTM D-1557

- A materials testing laboratory should be retained to provide on-site observation of earthwork and ground modification activities. Density tests should be performed in the top one foot of compacted existing ground, in each fill lift, and at the bottom of foundation excavations.

5.3 GROUNDWATER CONTROL

Depending upon the seasonal conditions, runoff from adjoined sites and pavements may cause significant surface water accumulation until drainage structures are emplaced. Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in conditions, such as physical disturbance or rain. Surface run-off water should be drained away from the excavations and not be allowed to pond. If possible, all footing concrete should be placed the same day that the footing excavation is made. If this is not possible, the footing excavations should be adequately protected.

5.4 DEWATERING

The seasonal high water table is estimated to be about 2.0 to 3.0 feet below existing ground surface in the area of the proposed treatment swale and greater than 5 feet below the existing ground surface in the area of the proposed structure(s). Therefore, dewatering may be required depending on the time of year. Dewatering can be accomplished using a sanded wellpoint system supplemented by a gravel bottom layer and pumping from a sump. Groundwater fluctuations will likely occur due to seasonal variations, runoff,

and other factors and should be considered when planning earthwork activities. The impact of runoff from adjacent properties, nearby water bodies, and other site-specific conditions which may affect groundwater recharge are beyond the scope of this exploration and should be considered when planning and designing a dewatering system.

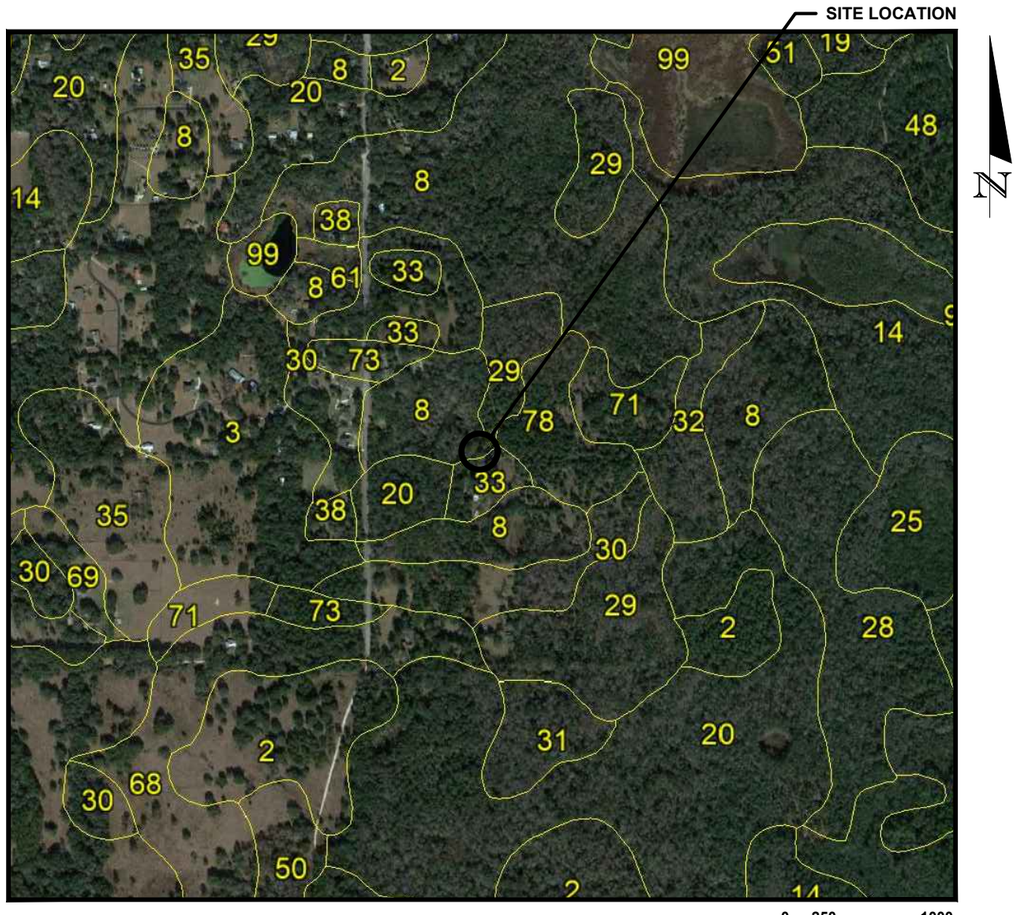
6.0 BASIS FOR RECOMMENDATIONS

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions at other locations will be different from those at the specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process itself may alter soil conditions. AREHNA is not responsible for the conclusions, opinions or recommendations made by others based on the data presented in this report.

APPENDIX

USDA & USGS Vicinity Maps
Boring Location Plan
Soil Boring Profiles
Summary of Laboratory Test Results
Summary of Double Ring Infiltration Test Results
Field and Laboratory Procedures

USDA SOIL SURVEY MAP

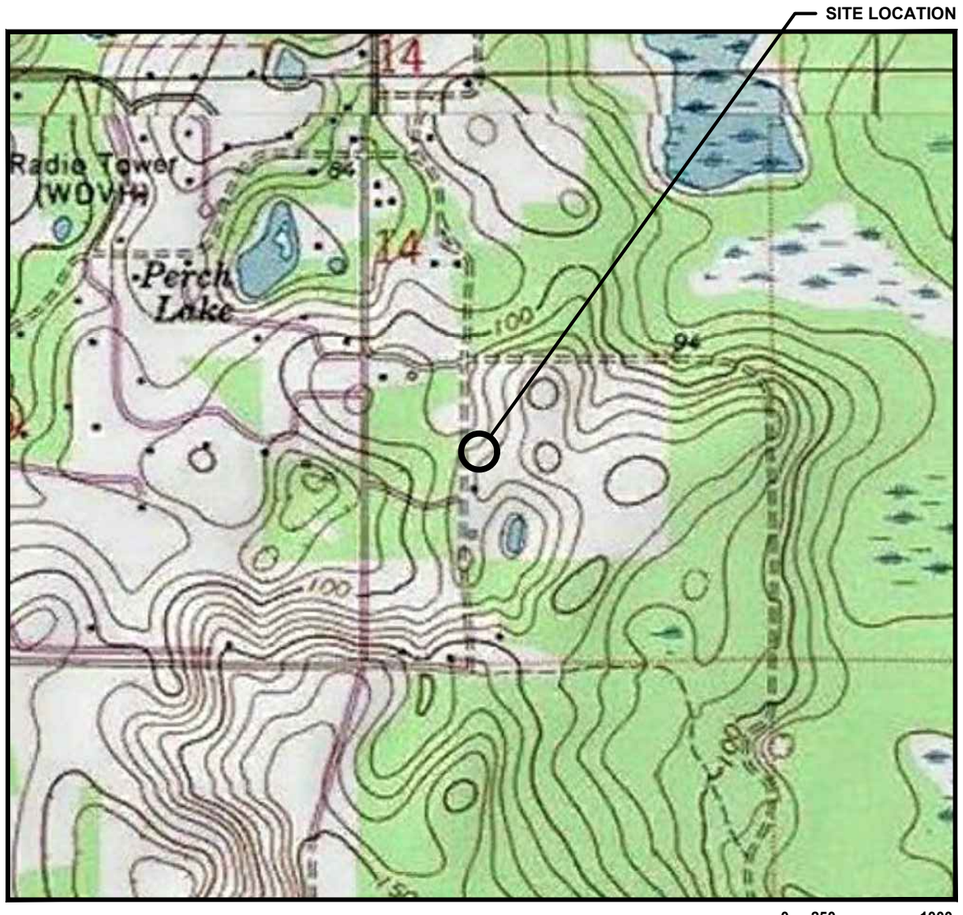


REFERENCE: USDA SOIL SURVEY OF ALACHUA COUNTY, FLORIDA

0 250 1000
Feet

TOWNSHIP: 10 S
RANGE: 20 E
SECTION: 14

USGS TOPOGRAPHIC MAP



REFERENCE: "MICANOPY, FLORIDA" USGS QUADRANGLE MAP

0 250 1000
Feet

TOWNSHIP: 10 S
RANGE: 20 E
SECTION: 14

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

USDA & USGS VICINITY MAPS

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	1

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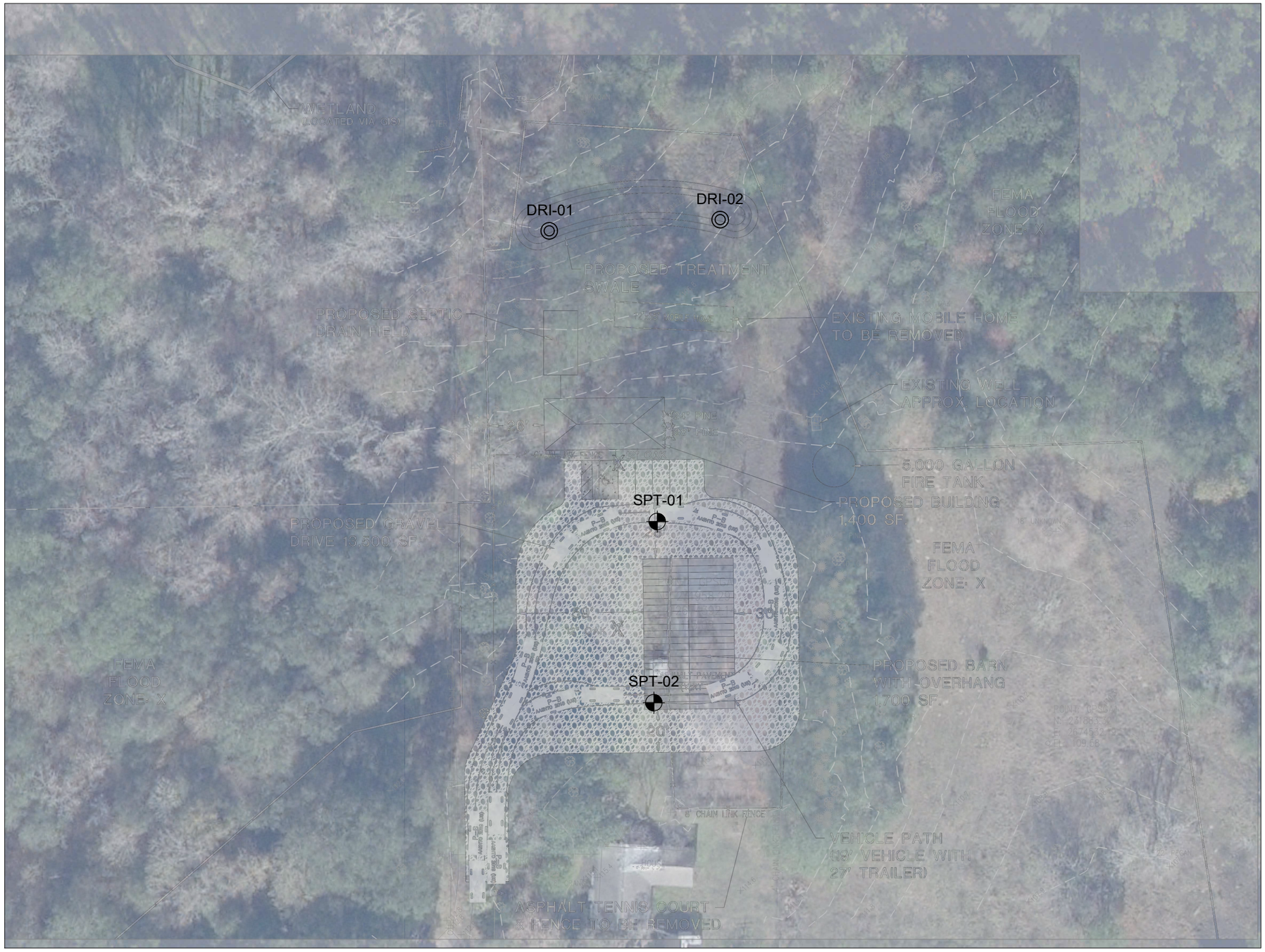

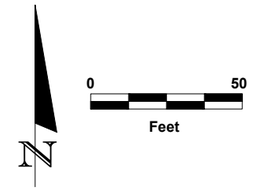

LEGEND

- APPROXIMATE LOCATION OF SPT BORING
- APPROXIMATE LOCATION OF DOUBLE RING INFILTRATION TEST

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

BORING LOCATION PLAN

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	2

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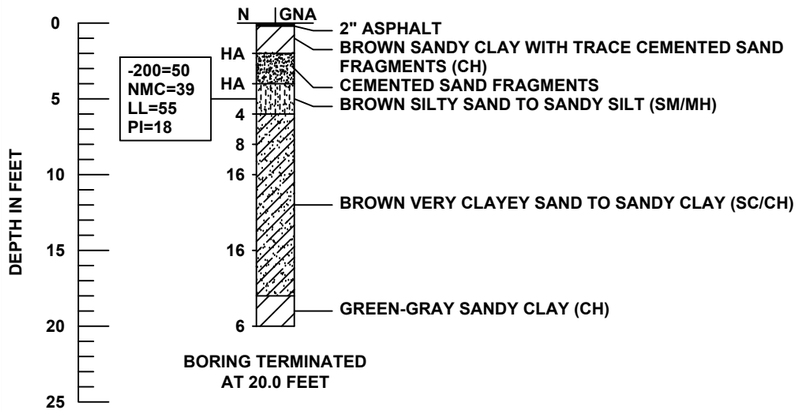
SPT-01

9/13/21

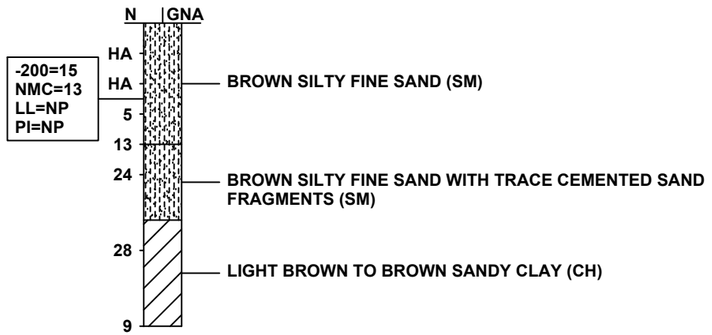


BORING TERMINATED AT 20.0 FEET

LATITUDE: N 29.6189908
LONGITUDE: W 82.2784979

SPT-02

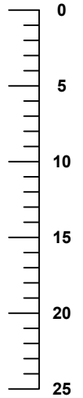
9/13/21



BORING TERMINATED AT 20.0 FEET

LATITUDE: N 29.6187576
LONGITUDE: W 82.2785083

LEGEND



- PAVEMENT
- SILTY SAND (SM)
- CEMENTED FRAGMENTS
- CLAYEY SAND (SC)
- FINE SAND (SP)
- CLAY (CH)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING

GROUNDWATER TABLE AT THE TIME OF DRILLING

ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

GNA GROUNDWATER TABLE NOT APPARENT

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION

HA HAND AUGERED TO AVOID UTILITY CONFLICTS AND SAFETY REASONS

-200 FINES PASSING THE #200 STANDARD SIEVE (%)

NMC NATURAL MOISTURE CONTENT (%)

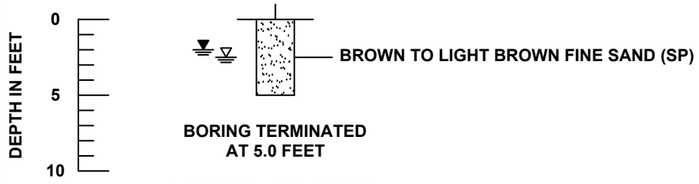
LL LIQUID LIMIT (%)

PI PLASTICITY INDEX (%)

NP NON PLASTIC

DRI-01

9/10/21



BORING TERMINATED AT 5.0 FEET

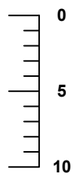
LATITUDE: N 29.6193678
LONGITUDE: W 82.2786487

DRI-02

9/10/21

BORING TERMINATED AT 5.0 FEET

LATITUDE: N 29.6193781
LONGITUDE: W 82.2783965



Soil Profile Notes:

1. The profiles depicted are of a generalized nature to highlight the major subsurface stratification features and material characteristics. The soil profiles include soil description, stratifications and penetration resistances. The stratifications shown on the boring profiles represent the conditions only at the actual boring location. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.
2. Groundwater levels generally fluctuate during periods of prolonged drought and extended rainfall and may be affected by man-made influences. In addition, a seasonal effect will also occur in which higher groundwater levels or temporary perched conditions are normally recorded in rainy seasons.
3. The Boring Locations Presented are Approximate and Based on Hand Held GPS with an Accuracy of +/- 10 Feet.
4. SPT borings were performed using an automatic hammer.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

SOIL BORING PROFILES

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	3

TABLE 1
SUMMARY OF LABORATORY TEST RESULTS
Payne's Prairie
Gainesville, Florida
AREHNA Project No. B-21-066

Boring No.	Sample Depth (feet)	ASTM Classification	Sieve Analysis (% Passing)	Atterberg Limits (%)			Natural Moisture Content (%)
			#200	LL	PL	Plasticity Index	
SPT-01	4.0 - 6.0	MH	50	55	37	18	39
SPT-02	4.0 - 6.0	SM	15	NP	NP	NP	13

SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

Payne's Prairie
GAINESVILLE, FLORIDA

AREHNA Project No.: B-21-066

Test: DRI - 1
Test Depth: 2 feet below ground surface
Outer Ring Diameter: 24 inches
Inner Ring Diameter: 12 inches
Test Duration: 4 hours

Date of Test: September 9, 2021
Test Procedure: ASTM D-3385

Soil Description: SAND
Groundwater Level: 2 feet

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	9000	549
15	10400	635
15	10000	610
15	10000	610
30	20000	1220
30	14000	854
30	15000	915
30	16000	976
30	14000	854
30	14000	854

Infiltration Rate: 10 in/hr

SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

Payne's Prairie
GAINESVILLE, FLORIDA

AREHNA Project No.: B-21-066

Test: DRI - 2
Test Depth: 2 feet below ground surface
Outer Ring Diameter: 24 inches
Inner Ring Diameter: 12 inches
Test Duration: 4 hours

Date of Test: September 9, 2021
Test Procedure: ASTM D-3385

Soil Description: SAND
Groundwater Level: 3 feet

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	12500	763
15	12000	732
15	13000	793
15	11000	671
30	23000	1404
30	21000	1281
30	21000	1281
30	24000	1465
30	21000	1281
30	20000	1220

Infiltration Rate: 18 in/hr

FIELD PROCEDURES

Standard Penetration Test (SPT) Borings

The SPT borings are performed in general accordance with ASTM D-1586, "Penetration Test and Split-Barrel Sampling of Soils." A rotary drilling process is used and bentonite drilling fluid is circulated in the boreholes to stabilize the sides and flush the cuttings. At regular intervals, the drilling tools are removed and soil samples are obtained with a standard 2-feet long, 2-inch diameter split-tube sampler. The sampler is first seated 6 inches and then driven an additional foot with blows of a 140-pound hammer falling under its own weight a distance of 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance." The penetration resistance, when properly interpreted, is an index to the soil strength and density.

Auger Boring

The auger borings are performed in general accordance with ASTM D-1452, "Standard Practice for Soil Investigation and Sampling by Auger Borings". Auger borings are advanced manually using a bucket-type hand auger. The soils encountered are identified, in the field, from cuttings brought to the surface by the augering process. Representative soil samples from the auger borings are placed in glass jars and transported to our laboratory where they are examined by an engineer for classification.

Double Ring Infiltration (DRI) Testing

The DRI tests are performed in general accordance with ASTM D3385 "Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer". The 24-inch diameter outer ring is set on the prepared and roughened surface and is driven into the soil to a depth of 6-inches. Care is taken not to disturb the soil adjacent to ring walls. The ring is then checked visually for levelness. The 12-inch diameter inner ring is then set concentrically within the outer ring and pushed and/or driven into the soil using methods described in the above paragraph to set the inner ring into the soil. The inner ring is then checked visually for level and location within the outer ring. Water is poured into both rings using a splash guard to reduce scouring of the soil surface during the testing. The inner ring and annular space is then simultaneously filled with water to a depth of 12 inches. Water is added during the testing to maintain the 12-inch depth and volume that is added during specific intervals is recorded. This water volume represents the volume infiltrated into the soils, and is converted to an infiltration velocity.

Water Content

The water content is the ratio, expressed as a percentage, of the weight of water in a given mass of soil to the weight of the solid particles. This test is conducted in general accordance with AASHTO T-265/ASTM D-2974.

Atterberg Limits (Plasticity)

A soil's Plasticity Index (PI) is the numerical difference between the Liquid Limit (LL) and the Plastic limit (PL). The LL is the moisture content at which the soil will flow as a heavy viscous fluid and is determined in general accordance with AASHTO T-89/ASTM D-4318. The PL is the moisture content at which the soil begins to crumble when rolled into a small thread and is also determined in general accordance with AASHTO T-90/ASTM D4318.

Fines Content

In this test, the sample is dried and then washed over a No. 200 mesh sieve. The percentage of soil by weight passing the sieve is the percentage of fines or portion of the sample in the silt and clay size range. This test is conducted in general accordance with AASHTO T-11/ASTM D-1140.

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

CORD BYRD
Secretary of State

Florida Department of Environmental Protection
Division of Recreation and Parks
Bureau of Design and Construction

June 28, 2023

Re: DHR No.: 2023-3562
Project: Paynes Prairie Preserve State Park - New Americorps Office / Pole Barn

To Whom It May Concern:

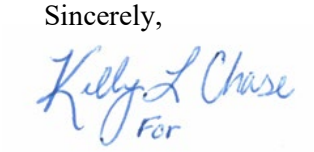
Our office reviewed the referenced project in accordance with Chapter 267, *Florida Statutes*, and implementing state regulations, for possible effects on historic properties listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*, or otherwise of historical, architectural or archaeological value.

Based on the information provided, this office recommends that ground-disturbing activities associated with this project be monitored by a professional archaeologist. The purpose of monitoring will be to identify archaeological deposits or significant artifacts that may be encountered. Should significant archaeological deposits, features or artifacts be encountered, the archaeologist must be empowered to direct the project activities to shift away from such resources. This discretionary power would enable the monitor to contact this office and to determine measures that must be taken to avoid, minimize adverse effects to the site; or to proceed to recover the archaeological resources in a professional manner. When the archaeologist has completed recordation and/or recovery measures the project activities would be allowed to continue as planned. At completion of the project, the archaeological monitor must compile a monitoring report in accordance with the provisions of Chapter 1A-46, Florida Administrative Code to be forwarded to this office. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

In addition, because the project will occur on state lands, it will require a 1A-32 permit. The archaeological consultant should contact Brandon Ackermann at Brandon.Ackermann@DOS.myflorida.com or 850-245-6334, Bureau of Archaeological Research.

If you have any questions, please contact Jennifer Tobias, Historic Sites Specialist, by email at *Jennifer.Tobias@dos.myflorida.com*.

Sincerely,

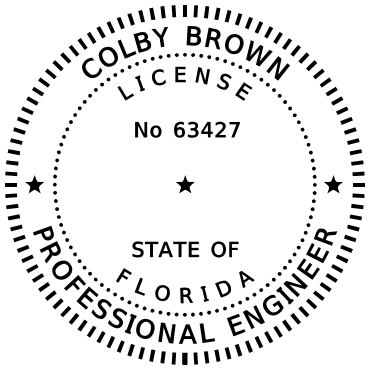


Alissa S. Lotane
Director, Division of Historical Resources and State Historic Preservation Officer

STORMWATER REPORT

Paynes Prairie Preserve
Modular Office Site Modifications

Alachua County, Florida



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

January 25, 2024

GENERAL PROJECT NARRATIVE

Pre-Development Site Conditions

The existing site is a 1.31 acre area located within, and on the western edge of, Paynes Prairie Preserve State Park, just southeast of Gainesville in Alachua County, Florida. The site is the northern portion of a 5.00 acre parcel, and is bounded on the east, west, and north by state land, and on the northwest corner and the south by low-density residential lots. The site contains an existing mobile home, another house that is partially inside the project area, and asphalt tennis court totaling 8,325 square feet of impervious area. Site vegetation is a combination of woods, grass and brush. Soils are predominantly Norfolk loamy fine sand (hyd. soil group B) and Millhopper sand (hyd. soil group A), as indicated by the SCS Soil Survey of Alachua County. Drainage is by overland flow from south to north, with an average ground slope of 4.2%. Discharge from the site drains offsite to an existing depression directly to the northwest. There are no mapped 100-year floodplains that affect this project. A basin map for the existing drainage situation is provided in Appendix A.

Post-Development Site Conditions

Proposed development includes the construction of an office building, garage/barn, gravel driveway and concrete parking areas, and a stormwater management facility for treatment of a total of 57,134 square feet of contributing area. The existing mobile home and tennis court are to be removed as part of this construction. The pond is graded at 4:1 sideslopes, from a bottom elevation of 105.50 to a top of berm elevation of 108.50. An outlet structure releases any flows above the treatment volume, and directs runoff by overland flow towards the existing offsite depression. The relocated access path on the north side will be sodded to serve as a maintenance berm for this pond. A swale is provided to direct runoff from the west side of the site around the office to the stormwater facility. Areas not directly impacted by the proposed construction are to remain in their existing condition. A basin map of the proposed drainage system is provided in Appendix B. Treatment volume and pond control structure calculations are provided in Appendix C. Contributing flow calculations for the western swale are provided in Appendix D.

Drainage Design Criteria

The governing stormwater design criteria are established by the St. Johns River Water Management District's Applicant Handbook, Vol. II, which includes requirements for treatment and pond recovery.

Treatment: This project proposes to construct a retention pond to meet the criteria of 1.5" of runoff from the contributing area. As communicated by the client during the pre-application meeting, the treatment criterion is expected to be 1" of runoff over the contributing area. However, given that this project is on state park lands, the wetlands to which this project drains

are to be considered Outstanding Florida Waters (OFW) according to F.A.C. Section 63-302, and therefore subject to an additional treatment of ½" of runoff over the contributing area, or 1.5" of runoff in total. Based on the stage-storage table in Appendix C, the provided treatment volume is 7,844 cubic feet at a control structure top elevation of 107.70, which exceeds the required volume of 7,142 cubic feet.

Recovery: Treatment volume recovery is achieved by natural infiltration into the surrounding Millhopper sand. According to the geotechnical report prepared by AREHNA, Project #B-21-066, dated October 4, 2021, the soil infiltration rate of this soil in the vicinity of the proposed pond (boring DRI-02) is 18 in/hr, or 36 ft/day. The water table at the time of boring was found to be at an elevation of 102.7 ft. Based on further conversations with AREHNA (see Appendix E), the base aquifer elevation was set at 98.0 ft, and the soil's fillable porosity value at 30%.

A groundwater infiltration model was performed in ICPR4 using the above values, except that a permeability rate, both horizontal and vertical, of 9 in/hr was used, introducing a factor of safety of 2 into the calculations. The results are included in Appendix F and show that the pond will draw down fully within 20 hours, thus fulfilling the 72-hour requirement and using a safety factor of 2.

Conclusion

The proposed development meets or exceeds the treatment and recovery requirements of Alachua County and SJRWMD.

Appendix A:

Existing Drainage Basin Map

CN numbers - Existing Conditions

BASIN	AREA	SOIL TYPE	LAND USE	CN	% of tot. area	weighted CN
E1-1	557	B	roof	98	0.008843375	0.86665079
E1-2	30	B	asphalt paving	98	0.000476304	0.04667778
E1-3	60	B	roof	98	0.000952608	0.093355561
E1-4	576	B	dirt road	82	0.009145035	0.749892832
E1-5	15430	B	open space fair	69	0.244978963	16.90354846
E1-6	195	B	open space fair	69	0.003095975	0.213622291
E2-1	285	A	dirt road	72	0.004524887	0.325791855
E2-2	5078	A	open space fair	49	0.08062237	3.95049615
E2-3	592	A	open space fair	49	0.009399063	0.4605541
E3-1	5849	B	asphalt paving	98	0.09286338	9.100611257
E3-2	27	B	roof	98	0.000428673	0.042010002
E3-3	91	B	open space fair	69	0.001444788	0.099690402
E3-4	19759	B	open space fair	69	0.313709613	21.64596332
E4-1	647	A	roof	98	0.010272287	1.006684131
E4-2	687	A	dirt road	72	0.010907359	0.78532984
E4-3	11344	A	open space fair	49	0.180106375	8.825212352
E4-4	1778	A	open space fair	49	0.028228943	1.383218227

Tot. Area:	62985	sf	1
Composite CN:	66.50		
S = (1000/CN)-10	5.04		
Q = (P-0.2S)^2/(P+0.8S)			
Q (0.5" rainfall) =	0.057	in	<-- choose this one
Q (1" rainfall) =	0.000	in	

EDGE OF WATER LINE
OBTAINED VIA SURVEY

WETLAND LINE
OBTAINED VIA SURVEY

75' WETLAND LINE SETBACK

PARCEL # 16215-007-000
OWNER: BAEZ HIRAM

PARCEL BOUNDARIES
OBTAINED FROM GIS DATA

PARCEL # 16219-002-000
OWNER: BOARD OF TRUSTEES OF THE, INTE
BOT TIIF DEP, DIVISION OF STATE LANDS

PARCEL # 16219-000-000
OWNER: BOARD OF TRUSTEES OF THE, INTE
BOT TIIF DEP, DIVISION OF STATE LANDS

PROPERTY BOUNDARY
OBTAINED FROM GIS DATA

EXISTING BASIN

WATER
8' DIRT DRIVE
10" POST
12'x55' MOBILE HOME
4'x6' SHED W/
WATER WELL
4' FIELD FENCE
FAUCET
7'x7' SHED
ASPHALT PAVEMENT TENNIS COURT
(VERY POOR CONDITION)
ANTENNA
PROPANE TANK
HOUSE
4" POST
4' GATE
4' CHAIN LINK FENCE
OHE

NORTH

0 20' 40'

GRAPHIC SCALE
SCALE: 1" = 20'
HALF SIZE: 1" = 40'

EXISTING LEGEND:

= SET 5/8" IRON ROD WITH CAP MARKED "TRAV. PT. LB 7560"
= OAK TREE
= PALM TREE
= POST
= SIGN
= SPOT ELEVATION
= GUY ANCHOR
= UTILITY POLE
= GATE POST
EL. = ELEVATION
INV. = INVERT
O.R.B. = OFFICIAL RECORD BOOK
PG. = PAGE
TBM = TEMPORARY BENCHMARK
= 5' CONTOUR
= 1' CONTOUR
= LOT LINES
= PARCEL LINES
= EDGE OF WATER
= EDGE OF PAVEMENT
= CHAIN LINK FENCE
= OVERHEAD UTILITY LINES
= UNDERGROUND ELECTRIC

LEGEND
EXIST. BASIN BOUNDARY

	DATE	REVISION	SYMBOL
			C
			D

	DATE	REVISION	SYMBOL
			A
			B

ISSUE DATE: 01/23/2024
COMP. FILE No.:
STATE PROJECT No.:

DESIGNER : JS
DRAWN BY: CD
REVIEWED BY: CB

Consultant:

GPI
GREENMAN-PEDERSEN, INC.
ENGINEERING & CONSTRUCTION SERVICES
1590 VILLAGE SQUARE BLVD.
TALLAHASSEE, FLORIDA 32309
PHONE (850) 668-2021
FAX (850) 668-5106
CERTIFICATE OF AUTHORIZATION NO.: 3498

Department of Environmental Protection
Division of Recreation and Parks
Bureau of Design and Construction
3800 Commonwealth Blvd. Tallahassee, FL 32399 (850) 245-2157

PROFESSIONAL REGISTRATION
COLBY BROWN, FLPE 83427

Paynes Prairie Preserve Modular Office

SHEET TITLE
DAINAGE BASIN MAP EXITING

PROJECT TITLE
MODULAR OFFICE BUILDING
& GARAGE / BARN

SHEET NO.
01

User: cdaniels
P:\2019\PLX-2019005.13 Paynes Prairie Modular Office REDESIGN\CADD\SHEET FILES\Drainage Existing.dwg 01/24/2024 07:23:32 PM

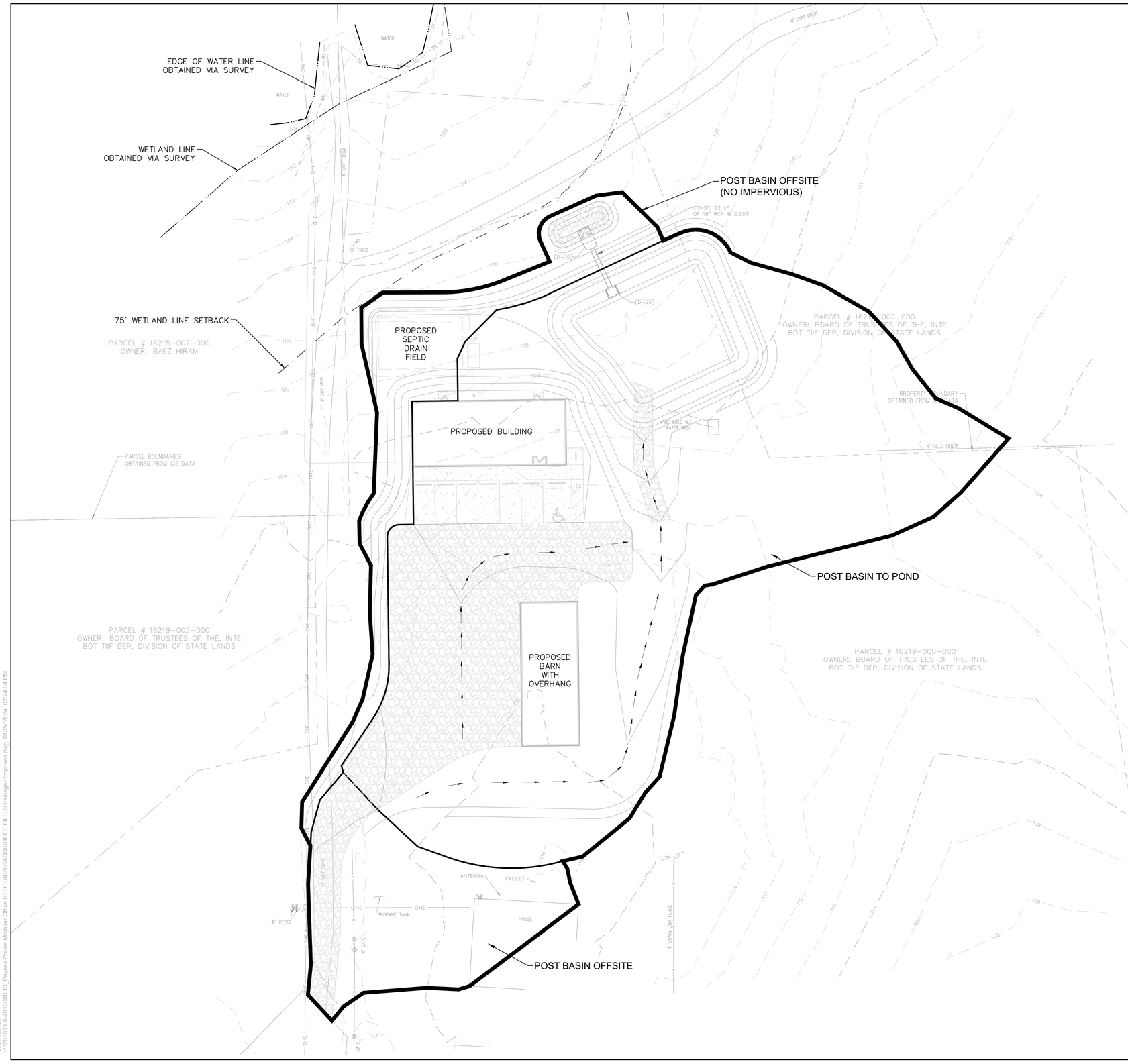
Appendix B:

Proposed Drainage Basin Map

CN numbers - Proposed Conditions

BASIN	AREA	SOIL TYPE	LAND USE	CN	% of tot. area	weighted CN
P1-1	555	B	roof	98	0.008811482	0.863525228
P1-2	720	B	roof	98	0.011431112	1.120248944
P1-3	214	B	conc. pvmt.	98	0.00339758	0.332962881
P1-4	8303	B	gravel drive	85	0.131822945	11.20495031
P1-5	4861	B	open space fair	69	0.07717588	5.325135744
P1-6	2194	B	open space fair	69	0.034833138	2.403486489
P2-1	810	A	roof	98	0.012860001	1.260280062
P2-2	787	A	open space fair	49	0.01249484	0.612247166
P3-1	294	A	roof	98	0.004667704	0.457434986
P3-2	276	A	water	100	0.004381926	0.438192614
P3-3	285	A	dirt road	72	0.004524815	0.325786683
P3-4	3118	A	open space fair	49	0.049503064	2.425650144
P3-5	385	A	open space fair	49	0.006112469	0.299511002
P4-1	535	B	conc. pvmt.	98	0.008493951	0.832407202
P4-2	720	B	roof	98	0.011431112	1.120248944
P4-3	57	B	roof	98	0.000904963	0.088686375
P4-4	6372	B	gravel drive	85	0.101165338	8.599053758
P4-5	18042	B	open space fair	69	0.286444607	19.76467786
P5-1	926	A	roof	98	0.01470168	1.440764614
P5-2	2377	A	water	100	0.037738545	3.773854507
P5-3	816	A	dirt road	72	0.01295526	0.932778713
P5-4	9555	A	open space fair	49	0.151700378	7.433318515
P5-5	784	A	open space fair	49	0.01244721	0.609913314

Tot. Area:	62986	sf	1
Composite CN:	71.67		
S = (1000/CN)-10	3.95		
Q = (P-0.2S)^2/(P+0.8S)			
Q (0.5" rainfall) =	0.023	in	<-- choose this one



EXISTING LEGEND:

- = SET 5/8" IRON ROD WITH CAP MARKED "TRAV. PT. LB 7560"
- = OAK TREE
- = PALM TREE
- = POST
- = SIGN
- = SPOT ELEVATION
- = GUY ANCHOR
- = UTILITY POLE
- = GATE POST
- EL. = ELEVATION
- INV. = INVERT
- O.R.B. = OFFICIAL RECORD BOOK
- PG. = PAGE
- TBM = TEMPORARY BENCHMARK
- = 5' CONTOUR
- = 1' CONTOUR
- = LOT LINES
- = PARCEL LINES
- = EDGE OF WATER
- = EDGE OF PAVEMENT
- = CHAIN LINK FENCE
- OHE = OVERHEAD UTILITY LINES
- UGE = UNDERGROUND ELECTRIC

PROPOSED LEGEND

- DRAINAGE BASIN
- PROP. SUBBASIN
- 110 PROP. MAJOR CONTOURS
- 111 PROP. MINOR CONTOURS
- PROP. CONCRETE PAVEMENT
- PROP. GRAVEL DRIVEWAY

SYMBOL	REVISION	DATE
A		
B		
C		
D		

ISSUE DATE: 01/23/2024
COMP. FILE No.:
STATE PROJECT No.:

DESIGNER : JS
DRAWN BY: CD
REVIEWED BY: CB

Consultant

GPI
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3800 Commonwealth Blvd., Tallahassee, FL 32399 (850) 245-2157

PROFESSIONAL REGISTRATION
COLBY BROWN, P.E. 65427

Paynes Prairie Preserve Modular Office

SHEET TITLE: DRAINAGE BASIN MAP PROPOSED

PROJECT TITLE: MODULAR OFFICE BUILDING & GARAGE / BARN

SHEET NO. 02

Appendix C:

Stormwater Treatment Facility Calculations

BASIN 1 / POND 1 DRY POND, AREA BREAKDOWN

DATE

MADE BY: JPS

CHCK BY:

PRE DEVELOPMENT CONDITION

BASIN LIMITS: STA. 1+00.00 to STA 3+00.00, CL

LOCATION	STATION	To	STATION	R/W WIDTH (Ft.)	IMPERVIOUS WIDTH						IMP. AREA (Acres)	PERV. AREA (Acres)	TOTAL AREA (Acres)
					TRAVEL LANES (Ft.)	SHLDR (Ft.)	TYPE 'F' C&G (Ft.)	TYPE 'E' C&G (Ft.)	TRAFFIC SEP.	SIDE-WALK (Ft.)			
Paynes Prairie Site	1+00.00		3+00.00	285.67	32.7	0	0	0.0	0	0	0.150	1.161	1.312
	+.00		+.00	0	0	0	0	0.0	0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0	0.0	0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0	0.0	0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0	0.0	0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0		0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0		0	0	0.00	0.00	0.00
SUBTOTAL:											***0.15***	***1.16***	***1.31***
											0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
INTERSECTING STREET	+.00		+.00		0						0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
INTERECTING STREET	+.00		+.00		0						0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
											0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
RDWY SUBTOTAL:											***0.15***	***1.16***	***1.31***
EXISTING BASIN POND											***0.00***	***0.00***	***0.00***
TOTAL:											**0.15**	**1.16**	**1.31**

Note: Project areas have been verified by CADD shape files

BASIN 1 / POND 1 DRY POND, AREA BREAKDOWN

DATE

MADE BY: JPS

CHCK BY:

POST DEVELOPMENT CONDITION

BASIN LIMITS: STA. 1+00.00 to STA 3+00.00, CL CONST.

LOCATION	STATION	To	STATION	R/W WIDTH (Ft.)	IMPERVIOUS WIDTH						IMP. AREA (Acres)	PERV. AREA (Acres)	TOTAL AREA (Acres)
					TRAVEL LANES (Ft.)	SHLDR (Ft.)	TYPE 'F' C&G (Ft.)	TYPE 'E' C&G (Ft.)	TRAFFIC SEP.	SIDE-WALK (Ft.)			
Paynes Prairie Site	1+00.00		3+00.00	285.67	67.5	0	0	0.0	0	0	0.3099	1.002	1.312
	+.00		+.00	0	0.00	0	0	0.0	0	0	0.000	0.00	0.000
	+.00		+.00	0	0.0	0	0	0.0	0	0	0.000	0.000	0.000
	+.00		+.00	0	0.00	0	0	0.0	0	0	0.000	0.00	0.000
	+.00		+.00	0	0.00	0	0	0.0	0	0	0.00	0.00	0.00
	+.00		+.00	0	0	0	0	0.0	0	0	0.000	0.00	0.00
	+.00		+.00	0	0	0	0	0.0	0	0	0.00	0.00	0.00
SUBTOTAL:											***0.31***	***1.00***	***1.31***
											0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
INTERSECTING STREET	+.00		+.00		0						0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
INTERECTING STREET	+.00		+.00		0						0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
											0.00	0.00	0.00
SUBTOTAL:											***0.00***	***0.00***	***0.00***
* Total area indicates actual area, Stationing indicates impervious area													
RDWY SUBTOTAL:											***0.31***	***1.00***	***1.31***
PROPOSED BASIN POND											***0.11***	***-0.11***	***0.00***
TOTAL:											**0.42**	**0.89**	**1.31**

Note: Project areas have been verified by CADD shape files

POLLUTION ABATEMENT VOLUME

		DATE
MADE BY:	JPS	
CHCK BY:		

POND: **1 - Dry Pond**

BASIN LIMITS: STA. 1+00.00 to STA 3+00.00, CL CONST.

TOTAL BASIN AREA: 1.31 AC.

IMPERVIOUS COVERAGE: 0.42 AC.

1st inch over site area and a half of runoff for diccharging into an OFW	**0.16**	ac-ft
Site area for water quality pervious/impervious calculations only	1.31	ac of site area for water quality pervious/impervious
Impervious area for water quality pervious/impervious calculations only	0.42	ac of site area for water quality pervious/impervious
Percentage of imperviousness for water quality	32.02%	impervious
2.5 inches times the runoff from the impervious area	**0.09**	ac-ft

0.16 ac-ft Volume controls

POND STAGE / STORAGE CALCULATIONS - DRY POND

BASIN 1 / POND 1:

		DATE
MADE BY:	JPS	
CHCK BY:		

PARCEL:

DESCRIPTION:

Control Elevation	105.50
BOTTOM LENGTH	45.00 FT
BOTTOM WIDTH	45.00 FT
TOP LENGTH	69.00 FT
TOP WIDTH	69.00 FT
FRONT SLOPE (?:1)	4.00
BACK SLOPE (?:1)	4.00
INC. OF STAGE TREA	0.15
INC. OF STAGE ATTN.	0.15

STAGE (ELEV.)	AREA (SQ-FT)	VOLUME (CU-FT)	(AC-FT)	
105.50	**2025**	0		Control Elevation
105.65	2134	312	0.01	
105.80	2247	641	0.01	
105.95	2362	986	0.02	
106.10	2480	1349	0.03	
106.25	2601	1730	0.04	
106.40	2601	2121	0.05	
106.55	2601	2511	0.06	
106.70	2981	2986	0.07	
106.85	3114	3444	0.08	
107.00	3249	3921	0.09	
107.15	3387	4418	0.10	
107.30	3528	4937	0.11	
107.45	3672	5478	0.13	
107.60	3819	6041	0.14	
107.75	3969	6625	0.15	
107.90	4122	**7232**	**0.17**	**WQ Treatment Volume Elevatio**
108.05	4277	7862	0.18	
108.20	4436	8515	0.20	
108.35	4597	9193	0.21	
108.50	**4761**	9896	0.23	Inside Top of Bank

Treatment Volume Required = **0.16** ac-ft
Attenuation Volume Required = **N/A** ac-ft

Treatment Volume Provided = **0.17** ac-ft
Attenuation Volume Provided = **N/A** ac-ft

Pond Area : 0.11 Acres

Appendix D:

Existing and Proposed ICPR4 Pond Modeling

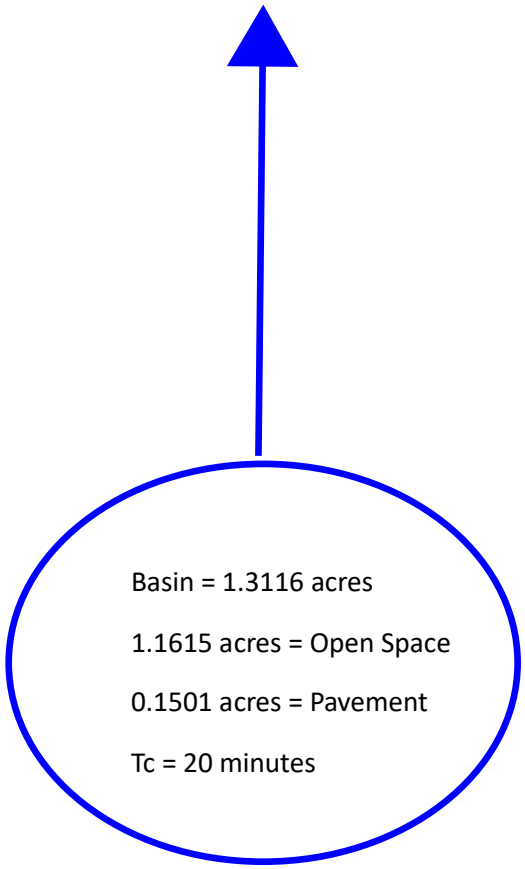
Existing ICPR4 Pond Modeling

Paynes Prairie State Park Modular Office – Pond Model

Boundary = Outfall

Time/Stage

Initial Stage= 101.00



Existing Conditions

Manual Basin: MNB-0010

Scenario: ICPR3
Node: Outfall
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 20.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 1.3116 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.1615	Open Space	B			
0.1501	Pavement	A			

Comment:

Node: OUTFALL

Scenario: ICPR3
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 101.00 ft
Warning Stage: 102.36 ft
Boundary Stage:

Comment:

Simulation: 100yr 24hr

Scenario: ICPR3
Run Date/Time: 12/3/2023 10:24:49 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Region Specification
Rainfall Name: ~FLMOD
Rainfall Amount: 11.30 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100yr-240hr

Scenario: ICPR3
Run Date/Time: 12/3/2023 10:30:46 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	240.0000

Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]

Min Calculation Time:	240.0000	0.1000	900.0000
Max Calculation Time:		240.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	240.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	240.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Region Specification
Rainfall Name: ~FLMOD
Rainfall Amount: 11.30 in
Storm Duration: 240.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 25yr 24hr

Scenario: ICPR3
Run Date/Time: 12/3/2023 11:32:03 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global

Max dZ:	1.0000 ft	OF Region Rain Opt:	Region Specification
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	8.10 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

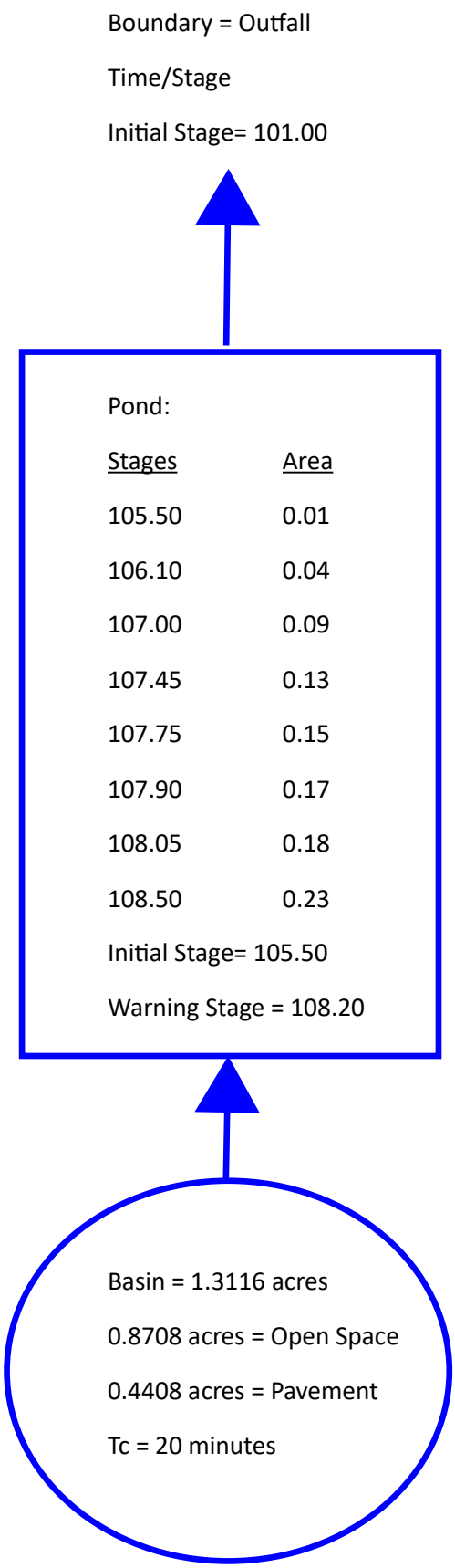
Comment:

Node Max Conditions [ICPR3]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OUTFALL	100yr 24hr	102.36	101.00	0.0000	6.26	0.00	0
OUTFALL	100yr-240hr	102.36	101.00	0.0000	0.97	0.00	0
OUTFALL	25yr 24hr	102.36	101.00	0.0000	4.02	0.00	0

Proposed ICPR4 Pond Modeling

Paynes Prairie State Park Modular Office – Pond Model



Proposed Conditions

Manual Basin: MNB-0010

Scenario: ICPR3
Node: Pond
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 20.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH323
Peaking Factor: 323.0
Area: 1.3116 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.8708	Open Space	B			
0.4408	Pavement	A			

Comment:

Node: OUTFALL

Scenario: ICPR3
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 101.00 ft
Warning Stage: 102.36 ft
Boundary Stage:

Comment:

Node: POND

Scenario: ICPR3
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 105.50 ft
Warning Stage: 108.20 ft

Stage [ft]	Area [ac]	Area [ft2]
105.50	0.0100	436
106.10	0.0400	1742
107.00	0.0900	3920
107.45	0.1300	5663
107.75	0.1500	6534
107.90	0.1700	7405
108.05	0.1800	7841
108.50	0.2300	10019

Comment:

Drop Structure Link: L-0010DS

Scenario: ICPR3
From Node: Pond
To Node: Outfall
Link Count: 1

Upstream Pipe

Invert: 104.70 ft
Manning's N: 0.0130

Geometry: Circular

Max Depth: 1.50 ft

Downstream Pipe

Invert: 104.50 ft
Manning's N: 0.0130

Geometry: Circular

Max Depth: 1.50 ft

Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	22.00 ft
FHWA Code:	1
Entr Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	107.90 ft
Control Elevation:	107.90 ft
Max Depth:	3.08 ft
Max Width:	4.08 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment: Proposed Drop Structure

Simulation: 100yr 240hr

Scenario:	ICPR3
Run Date/Time:	1/23/2024 8:22:27 AM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	240.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	240.0000	0.1000	900.0000
Max Calculation Time:		240.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	240.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	240.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Region Specification
Rainfall Name: ~FLMOD
Rainfall Amount: 11.30 in
Storm Duration: 240.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100yr 24hr

Scenario: ICPR3
Run Date/Time: 1/23/2024 10:17:12 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Region Specification
Rainfall Name: ~FLMOD
Rainfall Amount: 11.30 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 25yr 24hr

Scenario: ICPR3
Run Date/Time: 1/23/2024 10:24:33 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	30.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Good Condition
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: Post LU_LC
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 36.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global

Max dZ:	1.0000 ft	OF Region Rain Opt:	Region Specification
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	8.10 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Node Max Conditions [ICPR3]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
OUTFALL	100yr 240hr	102.36	101.00	0.0000	1.00	0.00	0
POND	100yr 240hr	108.20	107.98	0.0010	1.01	1.00	7633
OUTFALL	100yr 24hr	102.36	101.00	0.0000	6.36	0.00	0
POND	100yr 24hr	108.20	108.17	0.0010	6.60	6.37	8413
OUTFALL	25yr 24hr	102.36	101.00	0.0000	3.89	0.00	0
POND	25yr 24hr	108.20	108.09	0.0010	4.38	3.90	8051

Link Min/Max Conditions [ICPR3]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
L-0010DS - Pipe	100yr 240hr	1.00	0.00	-0.02	0.00	0.00	0.00
L-0010DS - Weir: 1	100yr 240hr	1.00	0.00	-0.02	0.90	0.90	0.90
L-0010DS - Pipe	100yr 24hr	6.36	0.00	0.04	0.00	0.00	0.00
L-0010DS - Weir: 1	100yr 24hr	6.37	0.00	0.03	1.66	1.66	1.66
L-0010DS - Pipe	25yr 24hr	3.89	0.00	-0.04	0.00	0.00	0.00
L-0010DS - Weir: 1	25yr 24hr	3.90	0.00	-0.03	1.41	1.41	1.41

Payne's Prairies Modular Office

ICPR4 Model Output						
Event	Existing			Proposed - Pond		
	25yr-24hr	100yr-24hr	100yr-240hr	25yr-24hr	100yr-24hr	100yr-240hr
Max Total Inflow - Outfall (CFS)	4.02	6.26	0.97	N/A	N/A	N/A
Max Total Outflow - Pond (CFS)	0.00	0.00	0.00	3.90	6.37	1.00
Link - Max Flow (CFS)	N/A	N/A	N/A	3.90	6.37	1.00
Node - Max Stage - Pond (ft.)	N/A	N/A	N/A	108.09	108.17	107.98
Node - Max Stage - Outfall (ft.)	101.00	101.00	101.00	101.00	101.00	101.00

Note: The Inflow into the Outfall is controled by the use of the Proposed Spreader Swale.

Appendix E:

Nutrient Loading Calculations

Complete Report (not including cost) Ver 4.3.5

Project: Paynes Prairie Modular Office
Date: 12/20/2023 9:34:46 AM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	Paynes Prairie Preserve State Park
Rainfall Zone	Florida Zone 2
Annual Mean Rainfall	52.00

Pre-Condition Landuse Information

Landuse	Rangeland/Parkland: TN=1.150 TP=0.055
Area (acres)	1.31
Rational Coefficient (0-1)	0.81
Non DCIA Curve Number	29.90
DCIA Percent (0-100)	100.00
Nitrogen EMC (mg/l)	1.150
Phosphorus EMC (mg/l)	0.055
Runoff Volume (ac-ft/yr)	4.592
Groundwater N (kg/yr)	0.140
Groundwater P (kg/yr)	0.140
Nitrogen Loading (kg/yr)	6.652
Phosphorus Loading (kg/yr)	0.451

Post-Condition Landuse Information

Landuse	Rangeland/Parkland: TN=1.150 TP=0.055
Area (acres)	1.31
Rational Coefficient (0-1)	0.81
Non DCIA Curve Number	29.90
DCIA Percent (0-100)	100.00
Wet Pond Area (ac)	0.00
Nitrogen EMC (mg/l)	1.150

Phosphorus EMC (mg/l)	0.055
Runoff Volume (ac-ft/yr)	4.592
Groundwater N (kg/yr)	0.990
Groundwater P (kg/yr)	0.990
Nitrogen Loading (kg/yr)	7.502
Phosphorus Loading (kg/yr)	1.301

Catchment Number: 1 Name: Paynes Prairie Preserve State Park

Project: Paynes Prairie Modular Office
Date: 12/20/2023

Retention Design

Retention Depth (in)	1.500
Retention Volume (ac-ft)	0.164

Watershed Characteristics

Catchment Area (acres)	1.31
Contributing Area (acres)	1.310
Non-DCIA Curve Number	29.90
DCIA Percent	100.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	52.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	11
Provided TN Treatment Efficiency (%)	82
Required TP Treatment Efficiency (%)	65
Provided TP Treatment Efficiency (%)	82

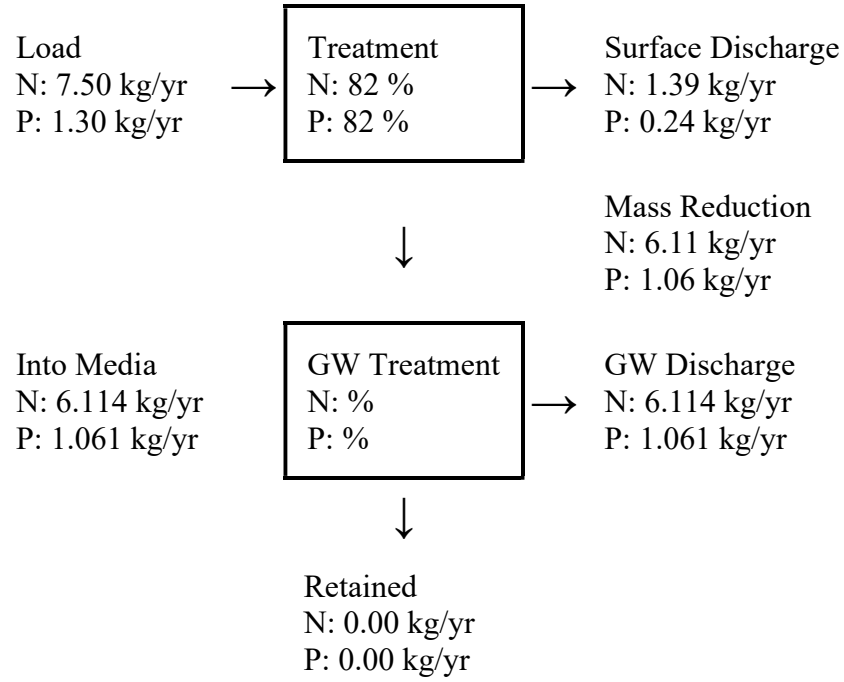
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

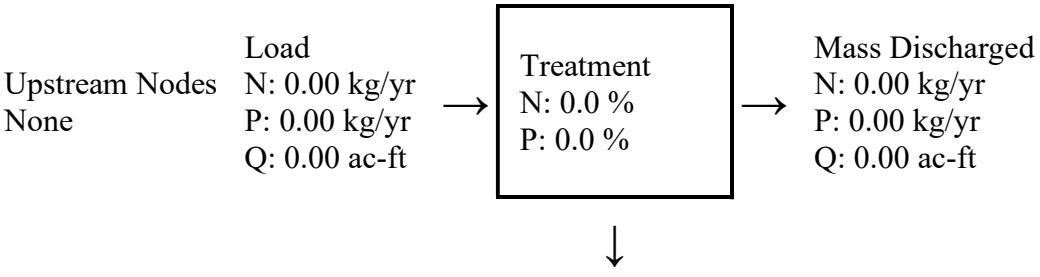
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	1.220
TN Mass Load (kg/yr)	6.114
TN Concentration (mg/L)	1.150
TP Mass Load (kg/yr)	1.061
TP Concentration (mg/L)	0.055

Load Diagram for Retention (stand-alone)



Load Diagram for Retention (As Used In Routing)



Mass Removed
N: 0.00 kg/yr
P: 0.00 kg/yr

Summary Treatment Report Version: 4.3.5

Project: Paynes Prairie
Modular Office

Analysis Type: Net Improvement

Date:12/20/2023

BMP Types:

Catchment 1 - (Paynes Prairie Preserve State Park) Retention
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Appendix F:

Geotechnical Report from AREHNA and

Additional Information from AREHNA

AREHNA | Engineering, Inc.

REPORT OF GEOTECHNICAL EXPLORATION

PAYNE'S PRAIRIE
GAINESVILLE, FLORIDA

AREHNA PROJECT NO. B-21-066

OCTOBER 4, 2021

Prepared For:
Greenman-Pedersen, Inc.
1590 Village Square Boulevard
Tallahassee, Florida 32309

Prepared By:
AREHNA Engineering, Inc.
5012 West Lemon Street
Tampa, Florida 33609

AREHNA | Engineering, Inc.

5012 West Lemon Street
Tampa, Florida 33609
Ph 813.944.3464 | Fax 813.944.4959

October 4, 2021

Mr. Tim Stackhouse, P.E.
Greenman-Pedersen, Inc.
1590 Village Square Boulevard
Tallahassee, Florida 32309

E-mail: TStackhouse@gpinet.com

Subject: **Report of Geotechnical Exploration**
Payne's Prairie – Geotechnical Services
3623 SE 35th Street
Gainesville, Florida
AREHNA Project B-21-063

Dear Mr. Stackhouse,

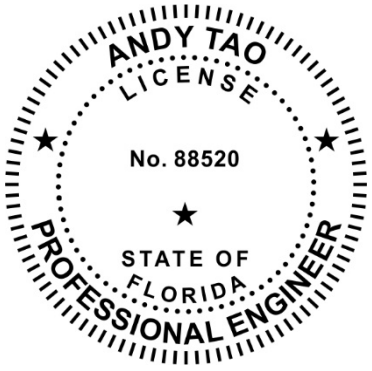
AREHNA Engineering, Inc. (AREHNA) is pleased to submit this report of our geotechnical exploration for the proposed project. Services were conducted in general accordance with AREHNA Proposal B.Prop-21-104, submitted April 23, 2021. The purpose of our geotechnical study was to obtain information on the general subsurface conditions for the proposed modular office building, pole barn, and treatment swale.

This report presents our understanding of the project, outlines our exploratory procedures, documents the field data obtained and includes our recommendations for site preparation and foundation design.

AREHNA appreciates the opportunity to have assisted Greenman-Pedersen, Inc. on this project. Should you have any questions with regards to this report, or if we can be of any further assistance, please contact this office.

Best Regards,
AREHNA ENGINEERING, INC.
FLORIDA BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION NO. 28410

Kristina LaCava, P.E.
Senior Geotechnical Engineer



This item has been digitally signed and sealed by:

Andy Tao, P.E.
Geotechnical Engineer
Florida Registration 88520
On the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Distribution: 1 – Addressee - Electronic
1 – File

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APPENDIX

1.0 PROJECT INFORMATION AND SCOPE OF WORK

1.1 SITE DESCRIPTION AND PROJECT CHARACTERISTICS

The project site is located at 3623 SE 35th Street in Gainesville, Florida (Parcel ID 16219-000-000). Based on e-mail communications dated April 22, 2021, we understand the proposed construction for the site includes two buildings (modular office building and a pole barn), drainage swale, and a new septic drain field. The boring locations were provided by the client.

Based on the provided structural plans the column loads will not exceed 8 kips. We also assumed that less than two feet of fill and no appreciable cut will be needed to achieve the planned building grades.

1.2 SCOPE OF WORK

The purpose of our geotechnical study was to obtain information on the general subsurface conditions at the proposed project site. The subsurface materials encountered were evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.
- General location and description of potentially deleterious materials encountered in the borings which may have an impact on the proposed construction.
- Allowable capacities and foundation settlement for foundations supporting the building.
- Field vertical permeability results using Double Ring Infiltration (DRI) testing. Horizontal permeability values will be estimated based on the vertical permeability results.
- General site preparation recommendations.

The following services were performed to achieve the above-outlined objectives:

- Requested utility location services from Sunshine811.
- Performed two Standard Penetration (SPT) borings to depths of 20 feet. Samples were collected, and Standard Penetration Test resistances measured at approximate intervals of two feet for the top ten feet and at approximate intervals of five feet thereafter. The boreholes were backfilled with soil cuttings and bentonite chips upon completion.
- Performed two Double Ring Infiltration (DRI) tests at approximate depths of two feet within the proposed swale and determined the seasonal high ground water level.
- Performed two hand auger borings to depths of five feet within the proposed swale adjacent to the DRI locations.

- Visually classified and stratified soil samples in the laboratory using the Unified Soil Classification System (USCS) and conducted a laboratory testing program on selected representative samples.
- Reported the results of the field exploration and engineering analysis. The results of the subsurface exploration are presented in this report, signed and sealed by a professional engineer specializing in geotechnical engineering.

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1 FIELD EXPLORATION

Our scope of work included two SPT borings extending to depths of approximately 20 feet below the existing ground surface and two Double Ring Infiltration (DRI) tests. A hand auger boring was performed adjacent to each DRI location to approximate depths of 5 feet below the existing ground surface, at the time of our field exploration.

The SPT borings were performed with the use of a Power Drill Rig using Bentonite "Mud" drilling procedures. Samples were collected and Standard Penetration Test resistances were measured continuously for the top ten feet and at approximate intervals of five feet thereafter. The upper four feet was manually hand augered to avoid any potential conflict with unmarked underground utilities. The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils."

The hand auger borings were performed by manually advancing a 3-inch diameter, 6-inch-long sampler into the soil until the sampler was full. The sampler was then retrieved and the soils in the sampler were removed and visually classified. The soil sampling was performed in general accordance with ASTM Test Designation D-1452, entitled "Soil Investigation and Sampling by Auger Borings." The boreholes were backfilled after the borings were completed.

The Double Ring Infiltration (DRI) tests (DRI-01 and DRI-02) were performed within the proposed treatment swale area by installing a 12-inch diameter inner steel ring and a 24-inch diameter outer steel ring concentrically into the ground to the desired test depth within excavated areas about 2 feet deep (test depth of 2 feet). Water was then added to a desired level in both rings and held constant. The amount of water added to the inner ring versus time was then recorded. This procedure was repeated every 15 minutes for the first hour and every 30 minutes for ensuing hours for a total of 4 hours or until a stabilized infiltration rate was achieved. The DRI test was performed in general accordance with ASTM D-3385, entitled "Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer." The results of the DRI's and other information gathered at the proposed treatment swale location is presented in the **Appendix** of this report.

Representative portions of these soil samples were sealed in glass jars, labeled and transferred to AREHNA's Tampa Office for appropriate classification.

The **Boring Location Plan** in the **Appendix** provides a boring location site plan showing the relationship of existing features to the borings. The borings were located in the field by measuring from existing features and using GPS coordinates.

2.2 LABORATORY TESTING

Laboratory testing consisting of natural moisture content, Atterberg limits, and single sieve (#200) gradation was performed on representative samples from the soil borings. The results of the laboratory testing are presented on **Table 1** in the **Appendix** . Lab results are also shown alongside the Soil Boring Profiles in the **Appendix**.

3.0 SUBSURFACE CONDITIONS

3.1 USGS TOPOGRAPHIC DATA

The topographic survey map published by the United States Geological Survey was reviewed for ground surface features at the proposed project location (**Appendix**). Based on this review, the natural ground surface elevations at the project site are approximately +105 to +115 feet National Geodetic Vertical Datum of 1929 (NGVD).

3.2 USDA NATURAL RESOURCES CONSERVATION SERVICE DATA

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) survey for Alachua County indicates that the soils at the project site consist of the following soil units:

Table 3.2.1 Summary of USDA Soil Survey

Soil Unit Number	Soil Name	Depth Below Natural Grade to High Water Table (feet)
8	Millhopper sand, 0 to 5 percent slopes	3.5 – 6.0
33	Norfolk loamy fine sand, 2 to 5 percent slopes	4.0 – 6.0

The soil survey also indicates that the average annual precipitation is 44 to 58 inches. The USDA Soil Survey map for the project site is attached in the **Appendix**.

3.3 SUBSURFACE CONDITIONS

A pictorial representation of the subsurface conditions encountered in the borings is shown on the Boring Profiles in the **Appendix**. These profiles and the following soil conditions highlight the general subsurface stratification. When reviewing the boring records and the subsurface soil profiles, it should be understood that soil conditions may vary between, and away from, boring locations.

Boring SPT-01 encountered firm to hard silts (MH) and clays (CH) from the existing ground surface to termination depth of approximately 20 feet below existing grade with SPT resistance values (N-values) ranging from 4 to 16 blows per foot (bpf). Cemented sand fragments were encountered between about 2 and 4 feet below existing ground surface.

Boring SPT-02 encountered loose to medium dense silty fine sand (SM) from the existing ground surface to a depth of 13 feet. Underlying the sand layer, stiff to very stiff clay, with N-values ranging from 9 to 28 bpf, was encountered to the termination depth of 20 feet below existing ground surface.

The hand auger borings generally encountered sand (SP) from the existing ground surface to the termination depths of 5 feet below existing ground surface.

3.4 GROUNDWATER CONDITIONS

The groundwater level was not encountered in the SPT borings. Drilling fluid was utilized in the SPT borings to advance the borehole. The addition of drilling fluid makes it difficult to obtain accurate groundwater measurements when the drilling fluid is introduced in the borehole prior to encountering the groundwater table. As a result, GNA (Groundwater Not Apparent) is shown adjacent to the soil profiles where the drilling fluid was introduced prior to encountering the groundwater table.

The groundwater table was encountered at depths of 30 to 48 inches below existing ground surface within the explored depths of the hand auger borings. Fluctuation in ground water levels should be expected due to seasonal climatic changes, construction activity, rainfall variations, surface water runoff, and other site-specific factors. Since groundwater level variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

3.5 ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

Based on the mapping performed by the USDA, soils information obtained from the site and our experience in the area, we estimate that the seasonal high water level will be encountered at approximate depths of 2.0 feet below existing ground surface in the vicinity of DRI-01 and 3.0 feet below the existing ground surface in the vicinity of DRI-02 within the drainage swale area.

Further, it is estimated that the seasonal high groundwater table will be encountered at a depth greater than 5 feet within the building area. It should be noted that clay/silt soils were in encountered in SPT-01 as shallow as at the existing ground surface. These soils have a tendency to perch the groundwater table for a period of time after rainfall events.

4.0 DESIGN RECOMMENDATIONS

4.1 GENERAL

Boring SPT-01 encountered firm to very stiff silty soils (SM/MH) and clayey soils (SC/CH) from the ground surface to termination depths of 20 feet. Although the groundwater level was not encountered in the borings, these soils will tend to perch groundwater/surface water after rainfall events. The silty/clayey soils do not meet the required gradation for backfill.

If surficial silt/clay is encountered within the footprint of the building areas we recommend removing a minimum of 12-inches of this material beneath the concrete slab and replacing with suitable, compacted structural fill. The soils should be removed across the footprint of the proposed building(s) and extending 5 feet beyond the perimeter of the building(s) footprint. If encountered during footing excavation, we recommend these clayey/silty soils be immediately sealed with 2-inches of lean (< 2,000 psi) concrete.

Our geotechnical evaluation is based upon the previously presented project information as well as the field data obtained during this geotechnical exploration. If the final structure locations or foundation loads are significantly different from those described or if the subsurface conditions during construction are different from those revealed by our borings, we should be notified immediately so that we might review our recommendations presented in this report.

After stripping to remove vegetation, root systems, and other deleterious materials, the site should be proofrolled and compacted. Any areas that appear unstable under proofrolling should be replaced with compacted fill. Our recommended site preparation is presented in Section 5.0, General Site Preparation.

4.2 SHALLOW FOUNDATION DESIGN

Following our recommended General Site Preparations, the proposed structures can be constructed on a system of conventional shallow spread or strip footings. The foundation system may bear on compacted acceptable existing soils or compacted structural fill soils. Shallow foundations may be designed using an allowable net soil bearing pressure of 2,500 psf. Our bearing capacity evaluation was based on correlations between N-values and the successful performance of similar structures on similar soil conditions.

All footings should be embedded so that the bottom of the foundation is a minimum of 18 inches below the adjacent compacted grades on all sides. Strip or wall footings should be a minimum of 24 inches wide and pad or column footings should be a minimum of 30 inches wide. These minimum footing sizes should be used regardless of whether the maximum allowable bearing pressures are fully developed in all loading conditions. These minimum footing sizes tend to provide adequate load bearing area to develop overall bearing capacity and account for minor variations in the bearing materials.

4.4 SETTLEMENT

The settlement of shallow foundations supported on the soils present at the site should occur rapidly during construction as dead loads are imposed at the footing locations. Provided that the recommended subsurface preparation operations are properly performed, the total settlements of isolated columns and wall footings should not exceed 1 inch, with differential settlements on the order of 50 percent of the total settlements.

It should be noted that boring SPT-01 encountered silty soils (SM/MH) and clayey soils (SC/CH) from the existing ground surface to an approximate depth of 20 feet. To minimize moisture content changes and softening of the bearing soils, it is recommended that these soils, if encountered during footing excavations, be immediately sealed with 2-inches of lean (< 2,000 psi) concrete.

5.0 GENERAL SITE PREPARATION

5.1 ON-SITE SOIL SUITABILITY

Silty soils (SM/MH) and clayey soils (SC/CH) were encountered within boring SPT-01 from the existing ground surface and extending to the termination depth of 20 feet. This material is not suitable for use as structural fill. If surficial clay is encountered within the footprint of the building areas, we recommend removal of at least 12-inches of this soil and replacing it with suitable structural fill. This should be performed within the proposed footprint and extending out 5 feet beyond the perimeter of the building footprint. Clayey bearing soils encountered in the footing excavations should be sealed with a 2 inch thick layer of lean (< 2,000 psi) concrete to minimize moisture content changes and softening of the bearing soils.

Sandy soils present at the site classified as sand (SP) to depths of 5 feet below existing ground surface are suitable for use as structural fill. Soils classified as clayey sand (SC), silty sand (SM), silt (MH), and clay (CH) are not suitable as structural fill. Soil excavated from below the groundwater level will be above the optimum moisture content required for compaction and will need to be dried before placement. Suitable structural fill materials should consist of fine to medium sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Any off-site materials used as fill should be approved by AREHNA prior to acquisition.

5.2 GENERAL

The initial step in site preparation should be the complete removal of all vegetation, topsoil, root systems, and other deleterious materials from beneath and to a minimum of five feet beyond the development perimeter. Also, prior to construction, the location of any existing foundations, underground irrigation, septic tanks, drainage, or other utility lines within the construction area should be established. In this regard it should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which subsequently may result in excessive settlements. The project areas should then be inspected and thoroughly proofrolled as directed by a Geotechnical Engineer. Our recommendations listed in this section should be used as a guideline for the project general specifications prepared by the Design Engineer:

- The entire site should be proofrolled with a large vibratory roller with a 4 foot diameter drum and a static weight of at least 10 tons. At least 8 complete coverages (4 in each perpendicular direction) should be performed over the entire building areas prior to raising site grades. Proofrolling should continue for the required number of passes and until the soil at a depth of 12 inches below the compaction surface has attained a minimum of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). Careful observations should be made during proofrolling to help identify any areas of soft-yielding soils that may require over excavation and replacement.

- Following satisfactory completion of proofrolling, additional fill can be placed and compacted as needed to achieve the desired grades. Fill should generally consist of dry fine sand with less than 12 percent passing the No. 200 sieve, free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition.

- Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557). The upper foot of pavement subgrade should be compacted to at least 98 percent of Modified Proctor. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

- Prior to beginning compaction, soil moisture contents should be adjusted in order to facilitate proper compaction. A moisture content within 2 percentage points of the optimum indicated by the Modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

- If silt (MH) or clayey soils (SC/CH) are found at the planned footing bearing depths, the excavations should immediately be sealed with two inches of lean (< 2,000 psi) concrete placed in the footing bottoms. If sand (SP) or silty sand (SM) is found at the footing bearing level, it should be compacted to 95% of ASTM D-1557

- A materials testing laboratory should be retained to provide on-site observation of earthwork and ground modification activities. Density tests should be performed in the top one foot of compacted existing ground, in each fill lift, and at the bottom of foundation excavations.

5.3 GROUNDWATER CONTROL

Depending upon the seasonal conditions, runoff from adjoined sites and pavements may cause significant surface water accumulation until drainage structures are emplaced. Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in conditions, such as physical disturbance or rain. Surface run-off water should be drained away from the excavations and not be allowed to pond. If possible, all footing concrete should be placed the same day that the footing excavation is made. If this is not possible, the footing excavations should be adequately protected.

5.4 DEWATERING

The seasonal high water table is estimated to be about 2.0 to 3.0 feet below existing ground surface in the area of the proposed treatment swale and greater than 5 feet below the existing ground surface in the area of the proposed structure(s). Therefore, dewatering may be required depending on the time of year. Dewatering can be accomplished using a sanded wellpoint system supplemented by a gravel bottom layer and pumping from a sump. Groundwater fluctuations will likely occur due to seasonal variations, runoff,

and other factors and should be considered when planning earthwork activities. The impact of runoff from adjacent properties, nearby water bodies, and other site-specific conditions which may affect groundwater recharge are beyond the scope of this exploration and should be considered when planning and designing a dewatering system.

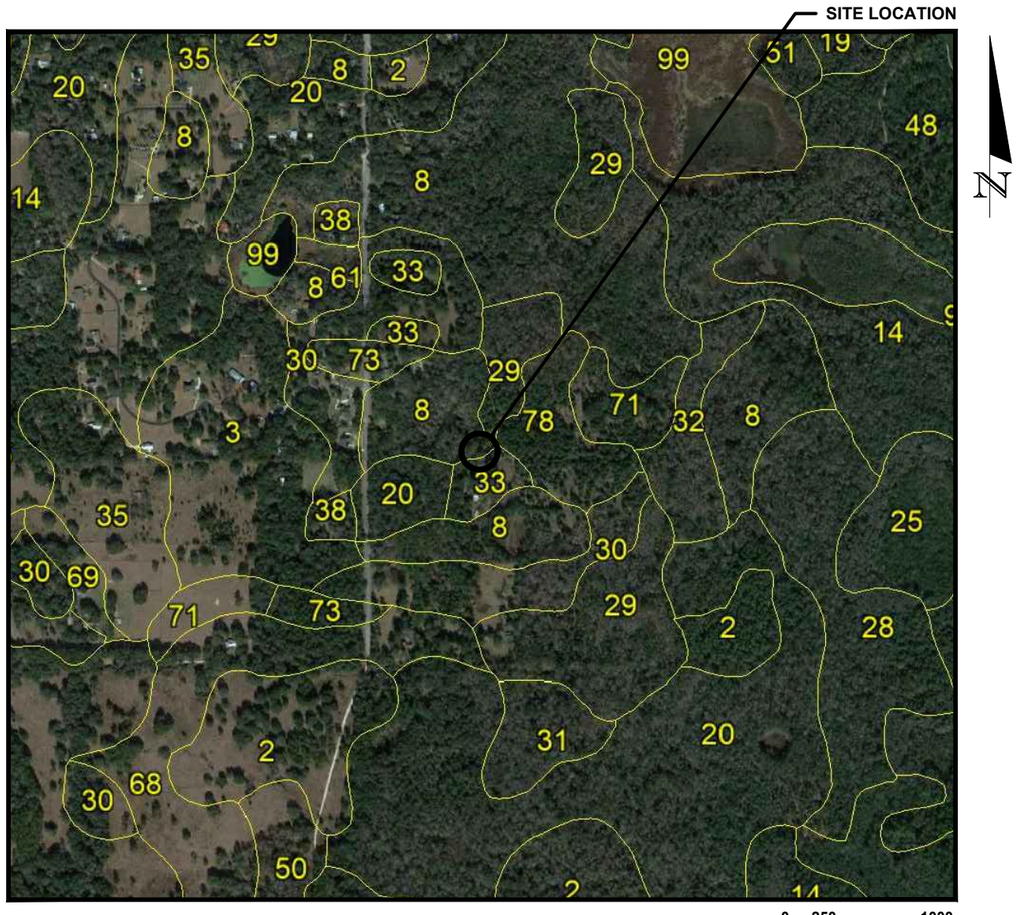
6.0 BASIS FOR RECOMMENDATIONS

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions at other locations will be different from those at the specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process itself may alter soil conditions. AREHNA is not responsible for the conclusions, opinions or recommendations made by others based on the data presented in this report.

APPENDIX

USDA & USGS Vicinity Maps
Boring Location Plan
Soil Boring Profiles
Summary of Laboratory Test Results
Summary of Double Ring Infiltration Test Results
Field and Laboratory Procedures

USDA SOIL SURVEY MAP

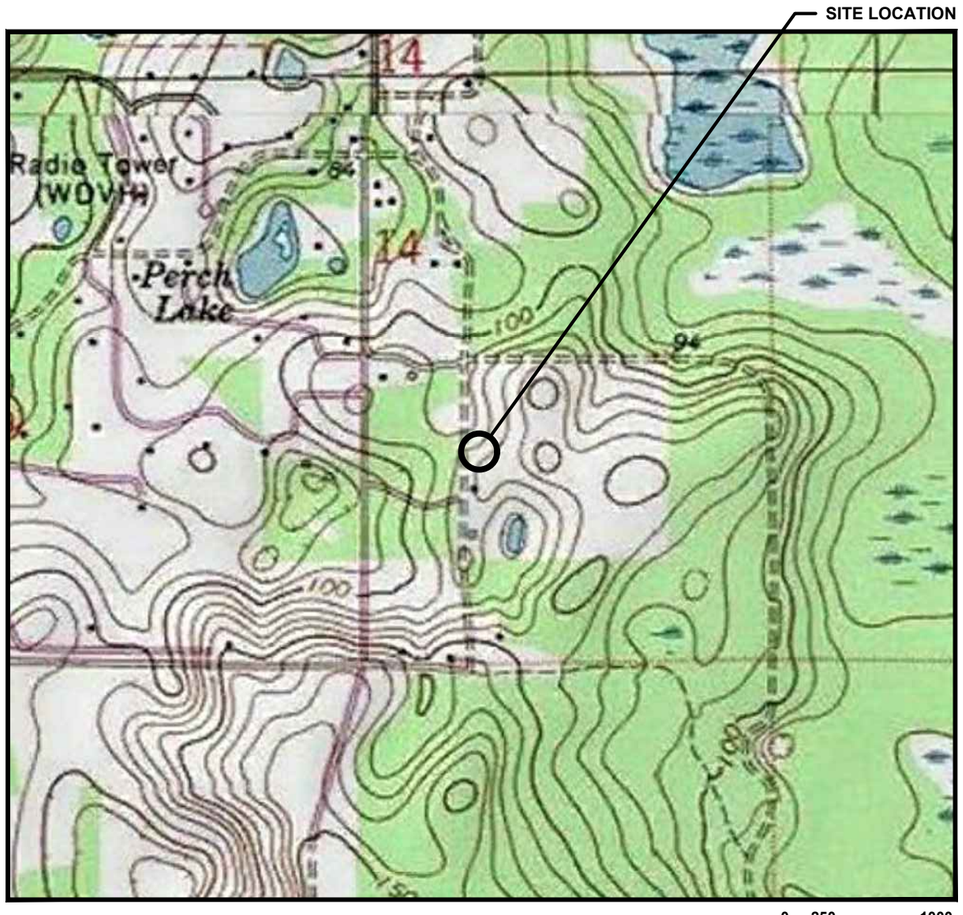


REFERENCE: USDA SOIL SURVEY OF ALACHUA COUNTY, FLORIDA

0 250 1000
Feet

TOWNSHIP: 10 S
RANGE: 20 E
SECTION: 14

USGS TOPOGRAPHIC MAP



REFERENCE: "MICANOPY, FLORIDA" USGS QUADRANGLE MAP

0 250 1000
Feet

TOWNSHIP: 10 S
RANGE: 20 E
SECTION: 14

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

USDA & USGS VICINITY MAPS

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	1

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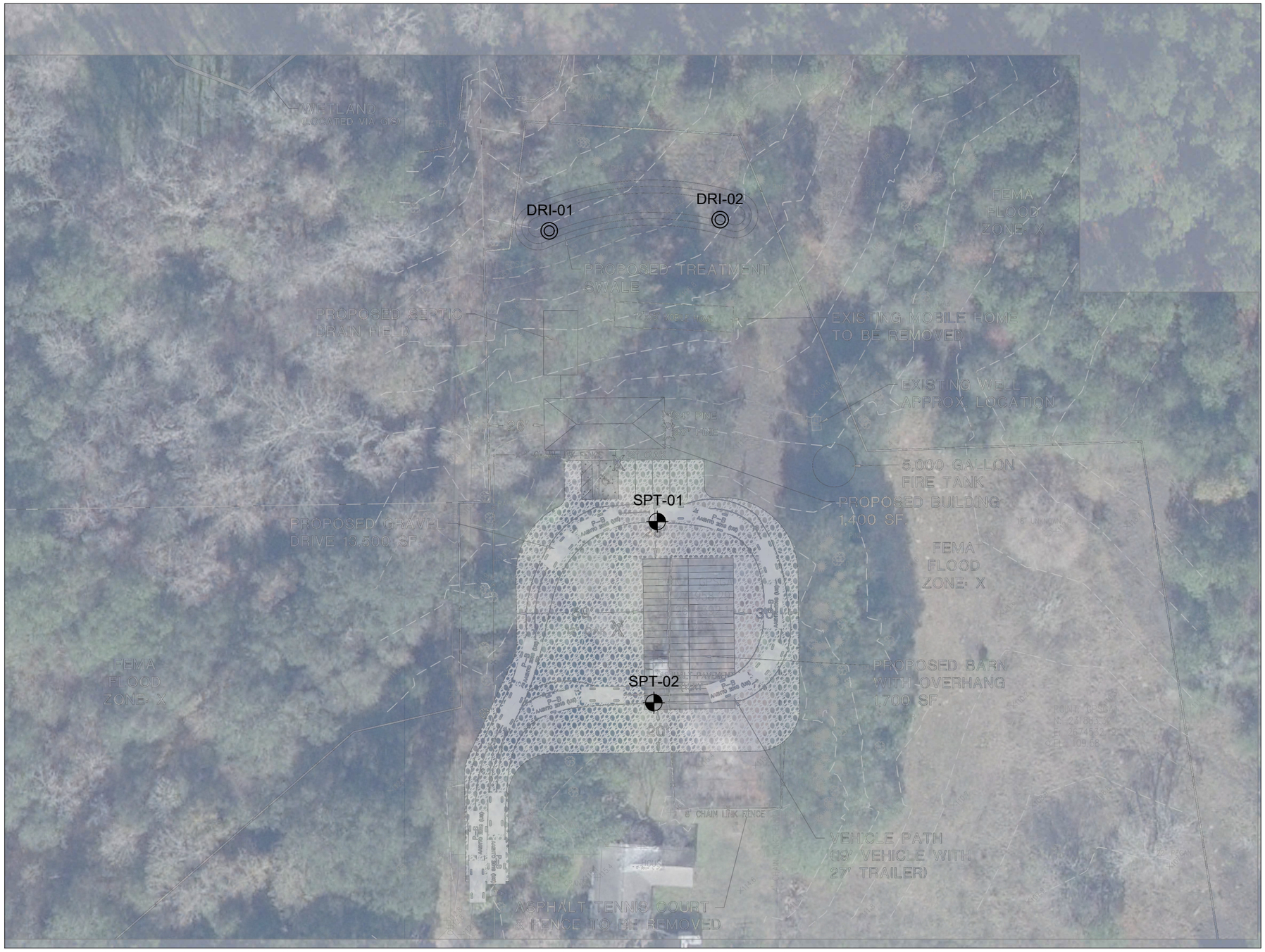

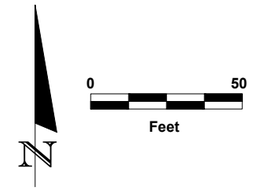

LEGEND

- APPROXIMATE LOCATION OF SPT BORING
- APPROXIMATE LOCATION OF DOUBLE RING INFILTRATION TEST

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

BORING LOCATION PLAN

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	2

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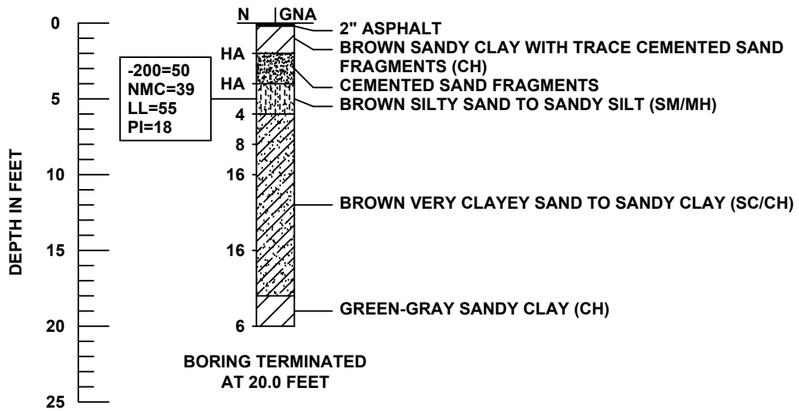
SPT-01

9/13/21

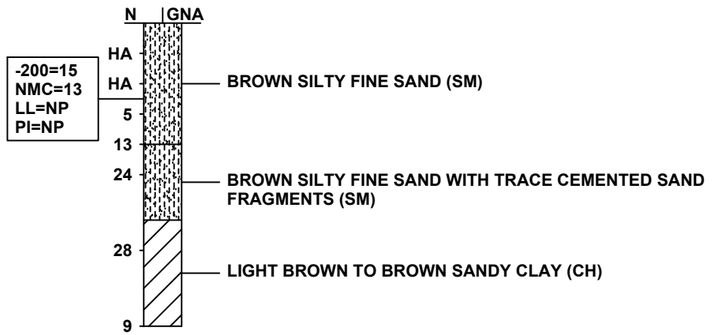


BORING TERMINATED AT 20.0 FEET

LATITUDE: N 29.6189908
LONGITUDE: W 82.2784979

SPT-02

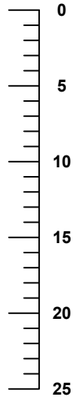
9/13/21



BORING TERMINATED AT 20.0 FEET

LATITUDE: N 29.6187576
LONGITUDE: W 82.2785083

LEGEND



- PAVEMENT
- SILTY SAND (SM)
- CEMENTED FRAGMENTS
- CLAYEY SAND (SC)
- FINE SAND (SP)
- CLAY (CH)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING

GROUNDWATER TABLE AT THE TIME OF DRILLING

ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

GNA GROUNDWATER TABLE NOT APPARENT

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION

HA HAND AUGERED TO AVOID UTILITY CONFLICTS AND SAFETY REASONS

-200 FINES PASSING THE #200 STANDARD SIEVE (%)

NMC NATURAL MOISTURE CONTENT (%)

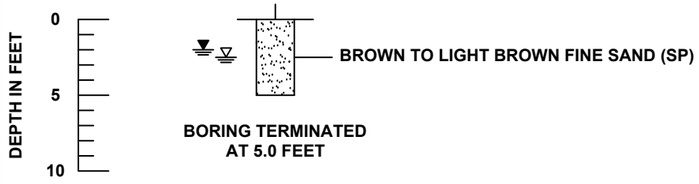
LL LIQUID LIMIT (%)

PI PLASTICITY INDEX (%)

NP NON PLASTIC

DRI-01

9/10/21



BORING TERMINATED AT 5.0 FEET

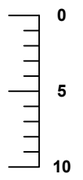
LATITUDE: N 29.6193678
LONGITUDE: W 82.2786487

DRI-02

9/10/21

BORING TERMINATED AT 5.0 FEET

LATITUDE: N 29.6193781
LONGITUDE: W 82.2783965



Soil Profile Notes:

1. The profiles depicted are of a generalized nature to highlight the major subsurface stratification features and material characteristics. The soil profiles include soil description, stratifications and penetration resistances. The stratifications shown on the boring profiles represent the conditions only at the actual boring location. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.
2. Groundwater levels generally fluctuate during periods of prolonged drought and extended rainfall and may be affected by man-made influences. In addition, a seasonal effect will also occur in which higher groundwater levels or temporary perched conditions are normally recorded in rainy seasons.
3. The Boring Locations Presented are Approximate and Based on Hand Held GPS with an Accuracy of +/- 10 Feet.
4. SPT borings were performed using an automatic hammer.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

SOIL BORING PROFILES

	NAME	DATE
DESIGNED BY:	AT	9/2021
DRAWN BY:	DG	9/2021
CHECKED BY:	AT	9/2021
SUPERVISED BY:	Andy Tao, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
PAYNE'S PRAIRIE GAINESVILLE, FLORIDA	B-21-066	3

TABLE 1
SUMMARY OF LABORATORY TEST RESULTS
Payne's Prairie
Gainesville, Florida
AREHNA Project No. B-21-066

Boring No.	Sample Depth (feet)	ASTM Classification	Sieve Analysis (% Passing)	Atterberg Limits (%)			Natural Moisture Content (%)
			#200	LL	PL	Plasticity Index	
SPT-01	4.0 - 6.0	MH	50	55	37	18	39
SPT-02	4.0 - 6.0	SM	15	NP	NP	NP	13

SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

Payne's Prairie
GAINESVILLE, FLORIDA

AREHNA Project No.: B-21-066

Test: DRI - 1
Test Depth: 2 feet below ground surface
Outer Ring Diameter: 24 inches
Inner Ring Diameter: 12 inches
Test Duration: 4 hours

Date of Test: September 9, 2021
Test Procedure: ASTM D-3385

Soil Description: SAND
Groundwater Level: 2 feet

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	9000	549
15	10400	635
15	10000	610
15	10000	610
30	20000	1220
30	14000	854
30	15000	915
30	16000	976
30	14000	854
30	14000	854

Infiltration Rate: 10 in/hr

SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

Payne's Prairie
GAINESVILLE, FLORIDA

AREHNA Project No.: B-21-066

Test:	DRI - 2	Date of Test:	September 9, 2021
Test Depth:	2 feet below ground surface		
Outer Ring Diameter:	24 inches	Test Procedure:	ASTM D-3385
Inner Ring Diameter:	12 inches		
Test Duration:	4 hours		
Soil Description:	SAND		
Groundwater Level:	3 feet		

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	12500	763
15	12000	732
15	13000	793
15	11000	671
30	23000	1404
30	21000	1281
30	21000	1281
30	24000	1465
30	21000	1281
30	20000	1220

Infiltration Rate: 18 in/hr

FIELD PROCEDURES

Standard Penetration Test (SPT) Borings

The SPT borings are performed in general accordance with ASTM D-1586, "Penetration Test and Split-Barrel Sampling of Soils." A rotary drilling process is used and bentonite drilling fluid is circulated in the boreholes to stabilize the sides and flush the cuttings. At regular intervals, the drilling tools are removed and soil samples are obtained with a standard 2-feet long, 2-inch diameter split-tube sampler. The sampler is first seated 6 inches and then driven an additional foot with blows of a 140-pound hammer falling under its own weight a distance of 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance." The penetration resistance, when properly interpreted, is an index to the soil strength and density.

Auger Boring

The auger borings are performed in general accordance with ASTM D-1452, "Standard Practice for Soil Investigation and Sampling by Auger Borings". Auger borings are advanced manually using a bucket-type hand auger. The soils encountered are identified, in the field, from cuttings brought to the surface by the augering process. Representative soil samples from the auger borings are placed in glass jars and transported to our laboratory where they are examined by an engineer for classification.

Double Ring Infiltration (DRI) Testing

The DRI tests are performed in general accordance with ASTM D3385 "Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer". The 24-inch diameter outer ring is set on the prepared and roughened surface and is driven into the soil to a depth of 6-inches. Care is taken not to disturb the soil adjacent to ring walls. The ring is then checked visually for levelness. The 12-inch diameter inner ring is then set concentrically within the outer ring and pushed and/or driven into the soil using methods described in the above paragraph to set the inner ring into the soil. The inner ring is then checked visually for level and location within the outer ring. Water is poured into both rings using a splash guard to reduce scouring of the soil surface during the testing. The inner ring and annular space is then simultaneously filled with water to a depth of 12 inches. Water is added during the testing to maintain the 12-inch depth and volume that is added during specific intervals is recorded. This water volume represents the volume infiltrated into the soils, and is converted to an infiltration velocity.

Water Content

The water content is the ratio, expressed as a percentage, of the weight of water in a given mass of soil to the weight of the solid particles. This test is conducted in general accordance with AASHTO T-265/ASTM D-2974.

Atterberg Limits (Plasticity)

A soil's Plasticity Index (PI) is the numerical difference between the Liquid Limit (LL) and the Plastic limit (PL). The LL is the moisture content at which the soil will flow as a heavy viscous fluid and is determined in general accordance with AASHTO T-89/ASTM D-4318. The PL is the moisture content at which the soil begins to crumble when rolled into a small thread and is also determined in general accordance with AASHTO T-90/ASTM D4318.

Fines Content

In this test, the sample is dried and then washed over a No. 200 mesh sieve. The percentage of soil by weight passing the sieve is the percentage of fines or portion of the sample in the silt and clay size range. This test is conducted in general accordance with AASHTO T-11/ASTM D-1140.

Jonathan Hickox

From: Andy Tao <atao@arehna.com>
Sent: Tuesday, March 8, 2022 1:39 PM
To: Jonathan Hickox
Cc: Tim Stackhouse; Bill Johnson
Subject: RE: Paynes Prairie

Jonathan, we do not have a deeper boring within the pond and there is lots of variability within the borings below EL. 105.

Annual Recharge Rate: We don't generally provide this. Based on the research it sum of all water that actually enters the ground surface during the year, including rainfall, runoff and subtracting evaporation and water absorbed by plants. In Florida it should be around the annual precipitation.
Aquifer Base Elevation: Conservatively the aquifer base will be pretty shallow ranging from EL. 98 to 96 feet. It may varying throughout the site.
Fillable Porosity: 30% for the clean sands within (DRI-01 and DRI-02). Please keep in mind it will reduce as it gets closer to the water table.

Feel free to reach out with any questions.

Thanks,
Andy

Andy Tao, PE, Geotechnical Engineer

AREHNA | Engineering, Inc.
12296 Wiles Road | Coral Springs, Florida 33076
Cell: 954.347.9008
email: atao@arehna.com | web: www.arehna.com
SBE//WMBE/DBE ▪ ACOE/AASHTO/FDOT Certified Lab

From: Jonathan Hickox <jhickox@gpinet.com>
Sent: Friday, March 4, 2022 4:08 PM
To: Andy Tao <atao@arehna.com>
Cc: Tim Stackhouse <tstackhouse@gpinet.com>; Bill Johnson <billjohnson@gpinet.com>
Subject: RE: Paynes Prairie

Andy,

Sorry it took awhile to get this to you, but here is a pdf showing where your bore holes are in reference to the proposed design.

Let me know if you have any other questions.

Jonathan

Jonathan Hickox
d 850.297.2928 | c 229.289.9686
An Equal Opportunity Employer

From: Andy Tao <atao@arehna.com>
Sent: Friday, March 4, 2022 12:30 PM
To: Jonathan Hickox <jhickox@gpinet.com>
Cc: Tim Stackhouse <tstackhouse@gpinet.com>; Bill Johnson <billjohnson@gpinet.com>
Subject: RE: Paynes Prairie

Can you please provide a PDF with our borings and the DRI locations on it? Below are the approximate coordinates.

Label	Latitude	Longitude
DRI-01	29.6193678	-82.2786487
DRI-02	29.6193781	-82.2783965
SPT-01	29.6189908	-82.2784979
SPT-02	29.6187576	-82.2785083

Thanks,
Andy

Andy Tao, PE, Geotechnical Engineer

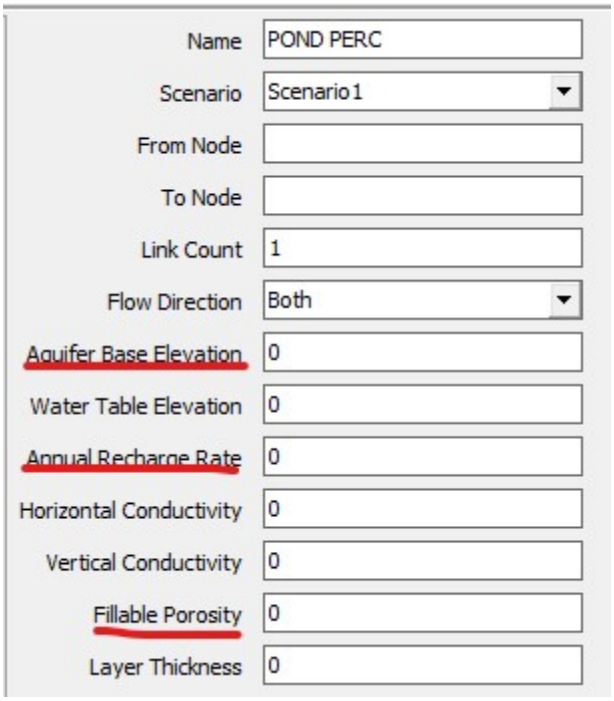
AREHNA | Engineering, Inc.
12296 Wiles Road | Coral Springs, Florida 33076
Cell: 954.347.9008
email: atao@arehna.com | web: www.arehna.com
SBE//WMBE/DBE ▪ ACOE/AASHTO/FDOT Certified Lab

From: Jonathan Hickox
Sent: Friday, March 4, 2022 8:49 AM
To: atao@arehna.com
Cc: Tim Stackhouse <tstackhouse@gpinet.com>; Bill Johnson <billjohnson@gpinet.com>
Subject: Paynes Prairie

Good morning Andy,

We are putting together a simple pond percolation model for the Paynes Prairie project in Gainesville for which Arehna produced the geotech report (Project No. B-21-066).

I was wondering if you could give us some guidance, based on your experience in that area, regarding the following parameters required by the modeling software.



Thanks for your consideration, and your time.

Sincerely,
Jonathan

Jonathan Hickox
Project Engineer

1590 Village Square Boulevard, Tallahassee, FL 32309
d 850.297.2928 | c 229.289.9686
jhickox@gpinet.com | www.gpinet.com

GPI

Engineering | Design | Planning | Construction Management

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PSMJ Resources, Inc. EMPLOYER OF CHOICE

TOP WORK PLACES 2022 USA

Appendix G:

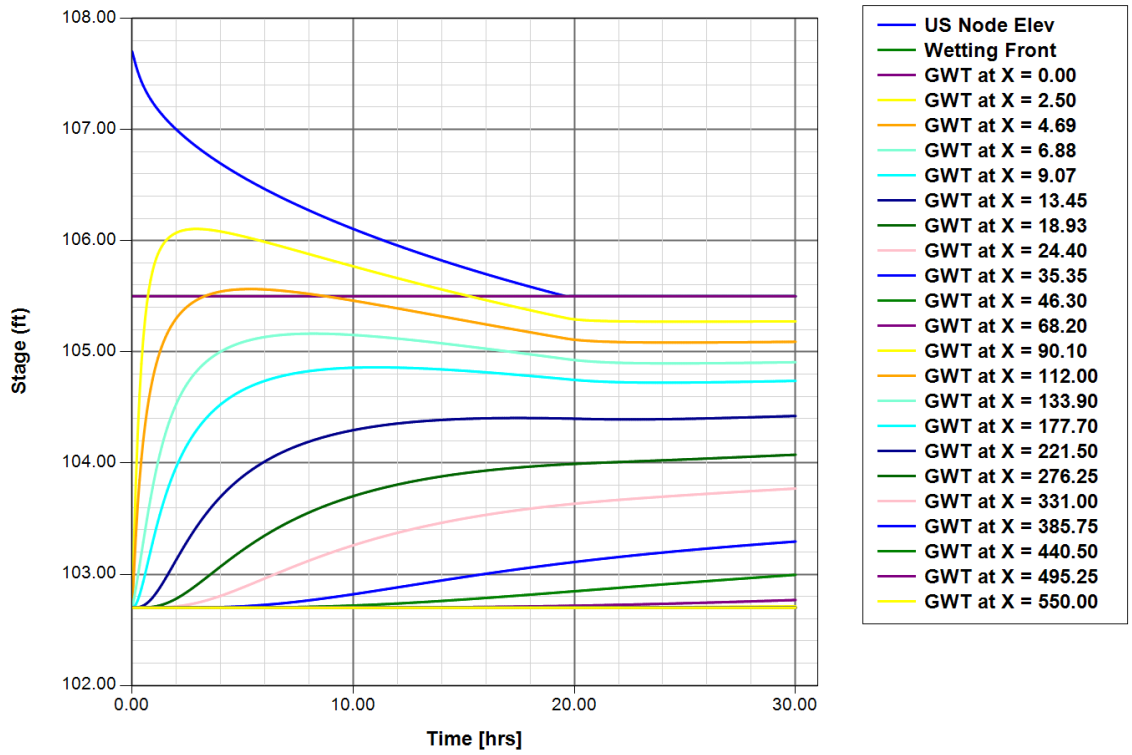
Groundwater Mounding Analysis Results

Percolation Link: POND PERC

Scenario:	Scenario1	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	POND		
To Node:	GROUNDWATER	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	294.00 ft
Flow Direction:	Both	Perimeter 2:	851.00 ft
Aquifer Base Elevation:	98.00 ft	Perimeter 3:	3943.00 ft
Water Table Elevation:	102.70 ft	Distance P1 to P2:	45.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	500.00 ft
Horizontal Conductivity:	18.000 fpd	# of Cells P1 to P2:	9
Vertical Conductivity:	18.000 fpd	# of Cells P2 to P3:	50
Fillable Porosity:	0.300		
Layer Thickness:	0.00 ft		

Comment:

Perc Link: POND PERC (Sim: POND DRAWDOWN) [POND PERC]



Additional ICPR4 Reports

ICPR4 Groundwater Modeling

Simple Basin: OVERALL BASIN

Scenario:	Scenario1
Node:	POND
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	20.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	1.3160 ac
Curve Number:	73.4
% Impervious:	43.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin Mass Balance Summary [Scenario1]

Basin Name	Sim Name	Total Rainfall	Total Irrigation	Total Runoff	Total ET	Total Initial Abst	Total Recharge	Change Soil Storage
OVERALL BASIN [in]	POND DRAWDOWN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OVERALL BASIN [ft3]	POND DRAWDOWN	0	0	0	0	0	0	0
OVERALL BASIN [ac-ft]	POND DRAWDOWN	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Node: GROUNDWATER

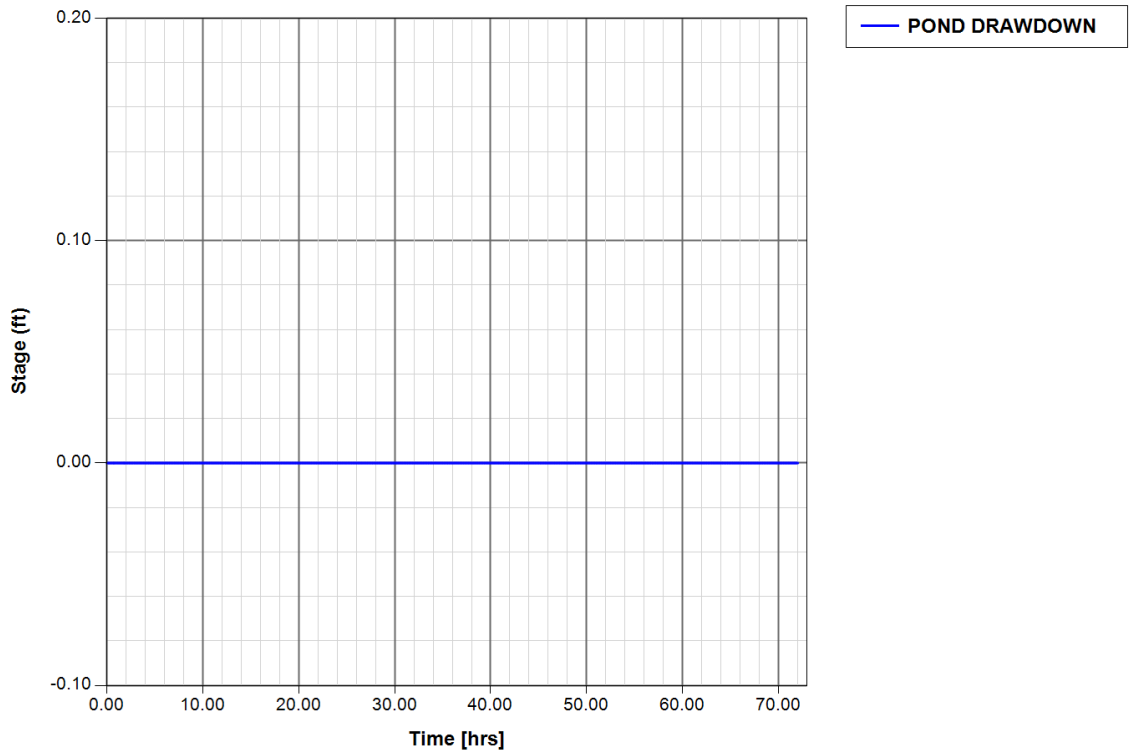
Scenario:	Scenario1
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	0.00 ft
Warning Stage:	0.00 ft
Boundary Stage:	

Comment:

Node Mass Balance Condensed [Scenario1]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
GROUNDWATER	POND DRAWDOWN	7845	0	7845

Stage [Node: GROUNDWATER]



Node: OUTFALL

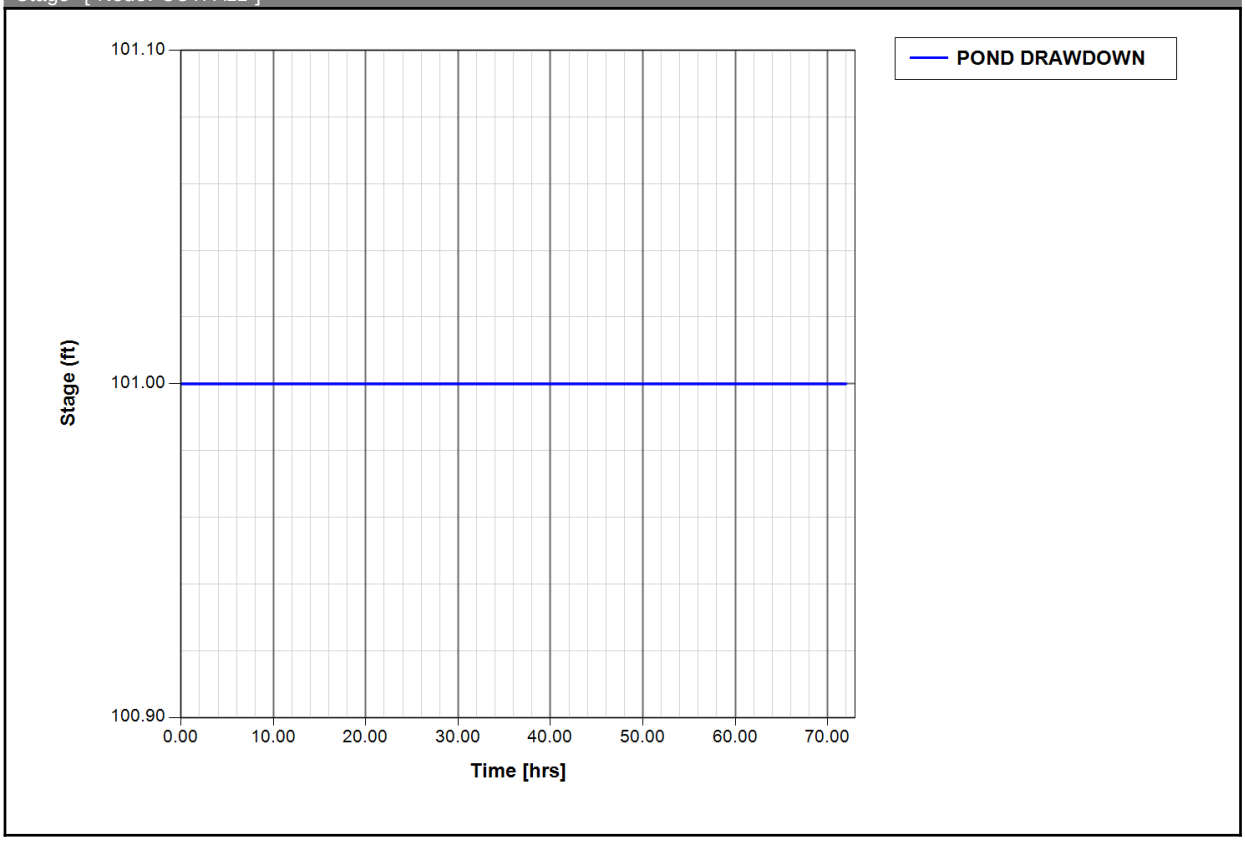
Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 101.00 ft
Warning Stage: 102.36 ft
Boundary Stage:

Comment:

Node Mass Balance Condensed [Scenario1]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
OUTFALL	POND DRAWDOWN	0	0	0

Stage [Node: OUTFALL]



Node: POND

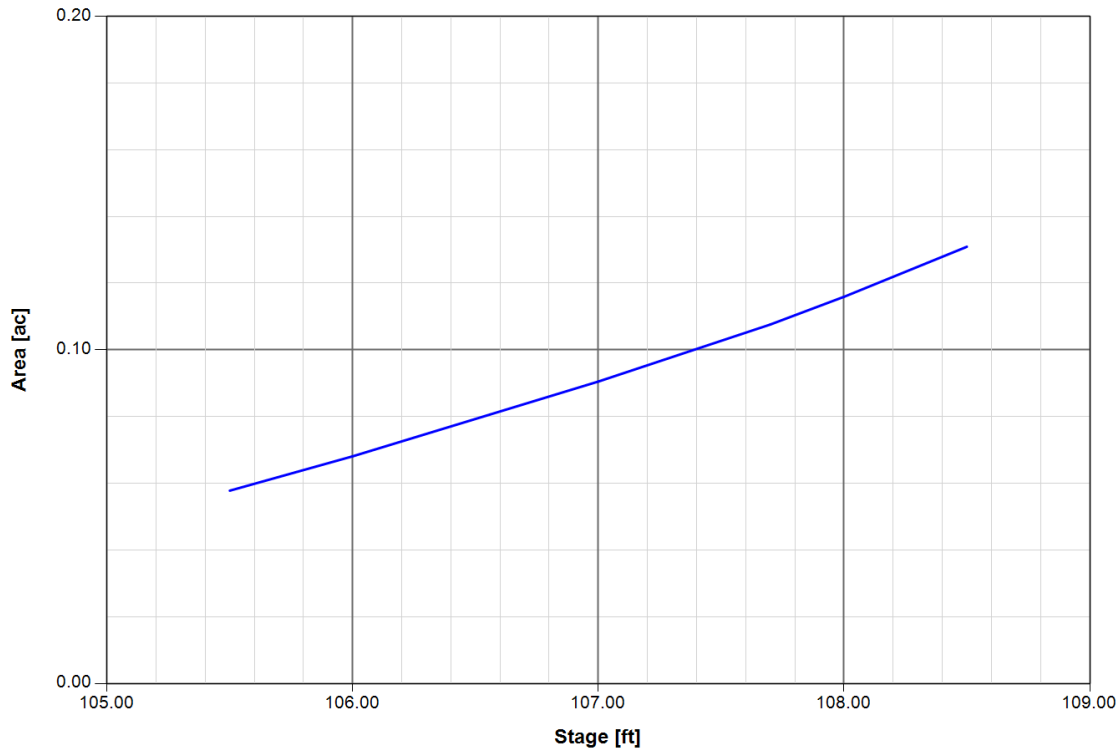
Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 107.70 ft
Warning Stage: 108.50 ft

Stage [ft]	Area [ac]	Area [ft2]
105.50	0.0578	2518
106.00	0.0681	2966
107.00	0.0905	3942
107.70	0.1076	4687

Stage [ft]	Area [ac]	Area [ft2]
108.00	0.1159	5049
108.50	0.1309	5702

Comment:

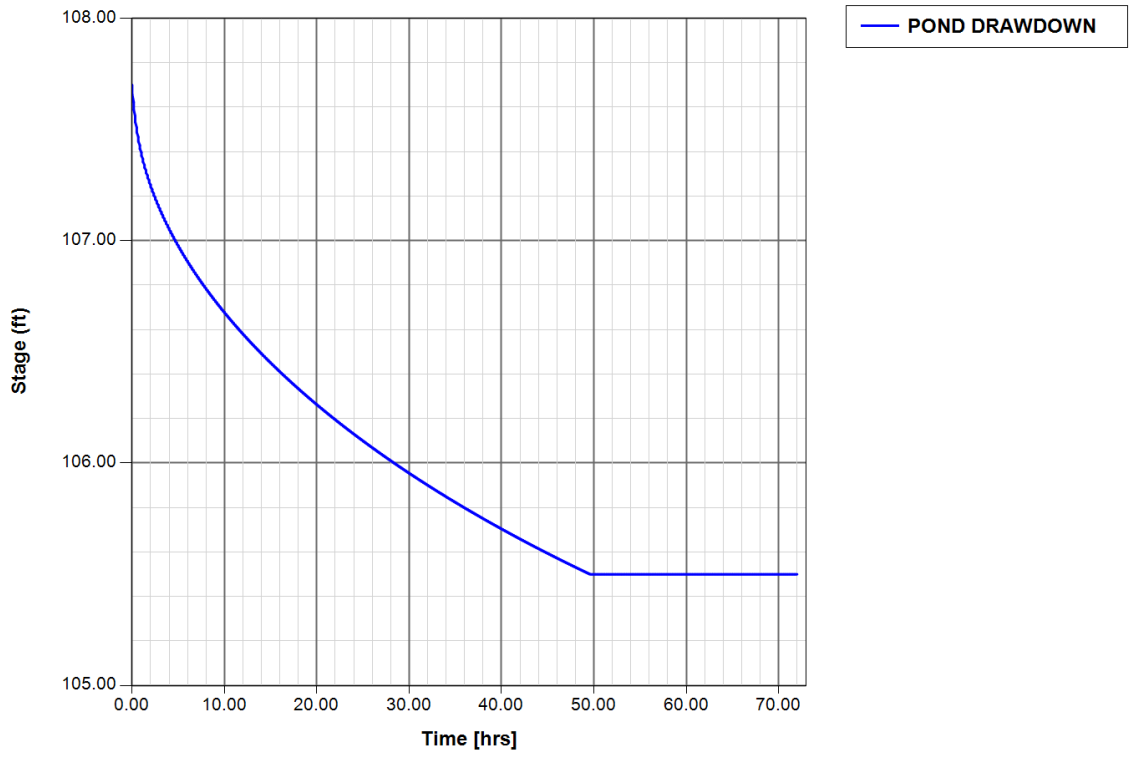
Node: POND Scenario: Scenario1



Node Mass Balance Condensed [Scenario1]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
POND	POND DRAWDOWN	0	7845	-7845

Stage [Node: POND]



Drop Structure Link: D-20		Upstream Pipe		Downstream Pipe	
Scenario:	Scenario1	Invert:	102.53 ft	Invert:	102.36 ft
From Node:	POND	Manning's N:	0.0130	Manning's N:	0.0130
To Node:	OUTFALL	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Combine	Default:	0.00 ft	Default:	0.00 ft
Increments:	0	Op Table:		Op Table:	
Pipe Count:	1	Ref Node:		Ref Node:	
Damping:	0.0000 ft	Manning's N:	0.0000	Manning's N:	0.0000
Length:	34.00 ft	Top Clip			
FHWA Code:	1	Default:	0.00 ft	Default:	0.00 ft
Entr Loss Coef:	0.50	Op Table:		Op Table:	
Exit Loss Coef:	1.00	Ref Node:		Ref Node:	
Bend Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	107.70 ft
Control Elevation:	107.70 ft
Max Depth:	2.00 ft
Max Width:	3.08 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

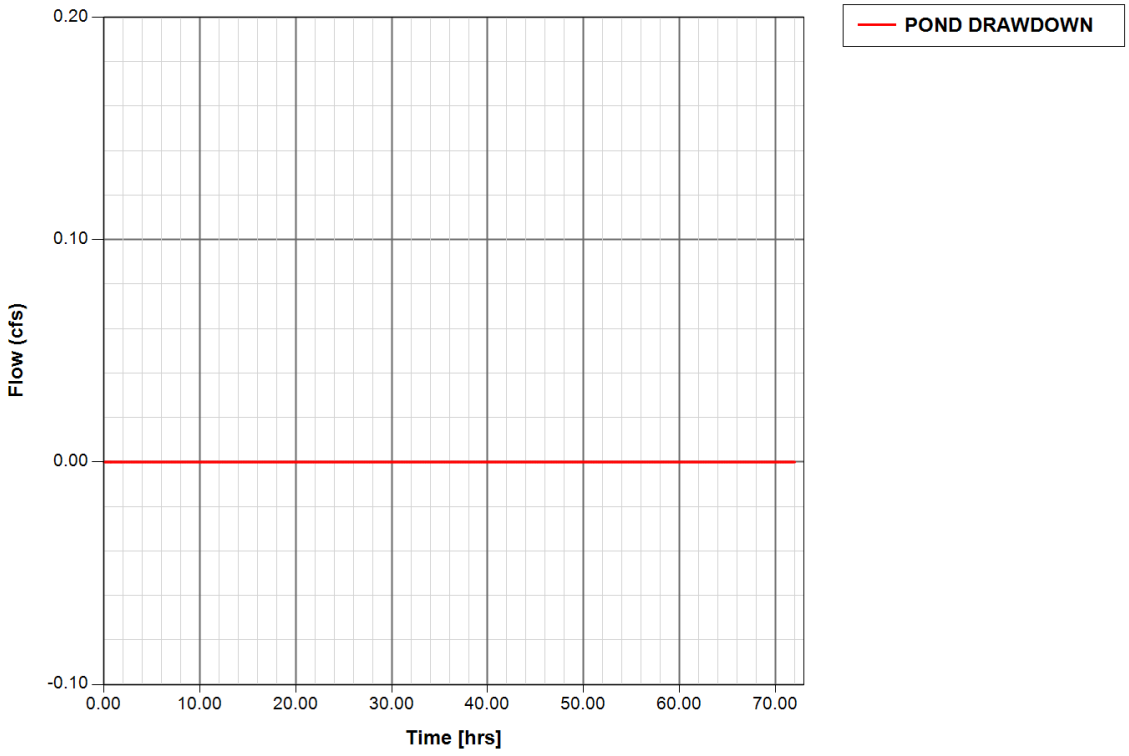
Weir Comment:

Drop Structure Comment:

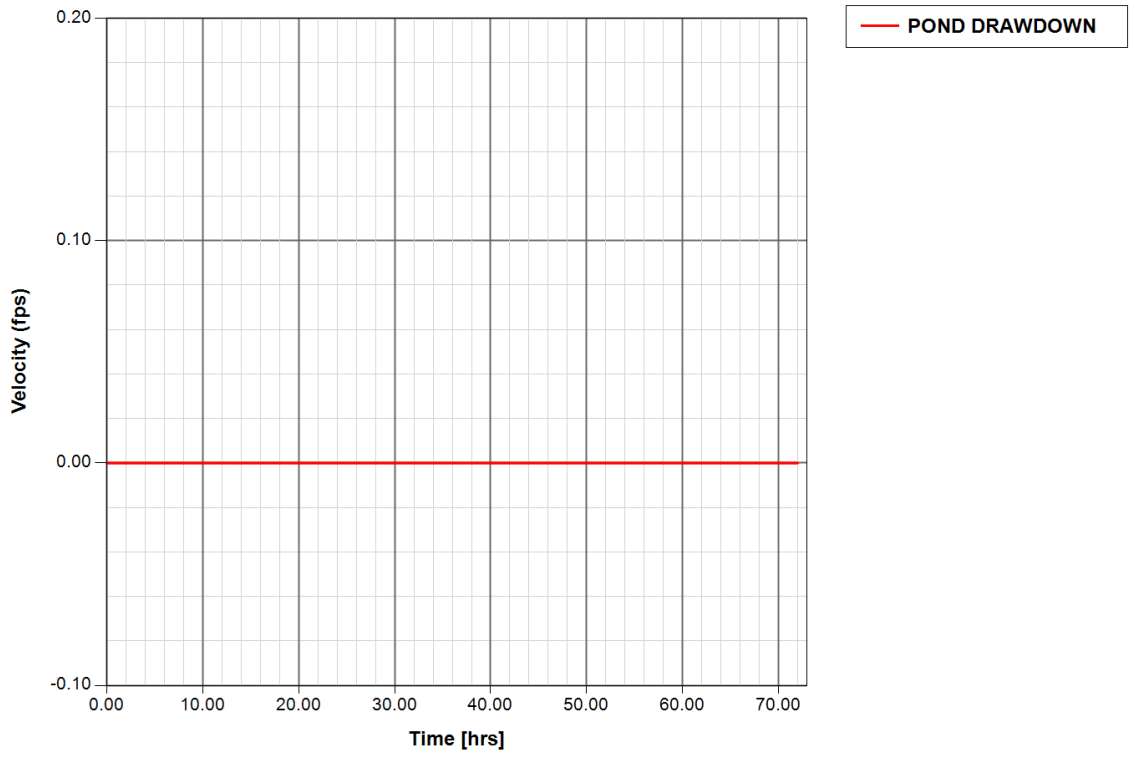
Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
D-20 - Pipe	POND DRAWDOWN	0.00	0.00	0.00	0.00	0.00	0.00
D-20 - Weir: 1	POND DRAWDOWN	0.00	0.00	0.00	0.00	0.00	0.00

Link Flow: D-20 [Scenario1]



Link Average Velocity: D-20 [Scenario1]



Percolation Link: POND PERC

Scenario:	Scenario1	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	POND		
To Node:	GROUNDWATER	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	218.00 ft
Flow Direction:	Both	Perimeter 2:	484.00 ft
Aquifer Base Elevation:	98.00 ft	Perimeter 3:	2518.00 ft
Water Table Elevation:	102.70 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	14.000 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	14.000 fpd	# of Cells P2 to P3:	50
Fillable Porosity:	0.300		
Layer Thickness:	0.00 ft		

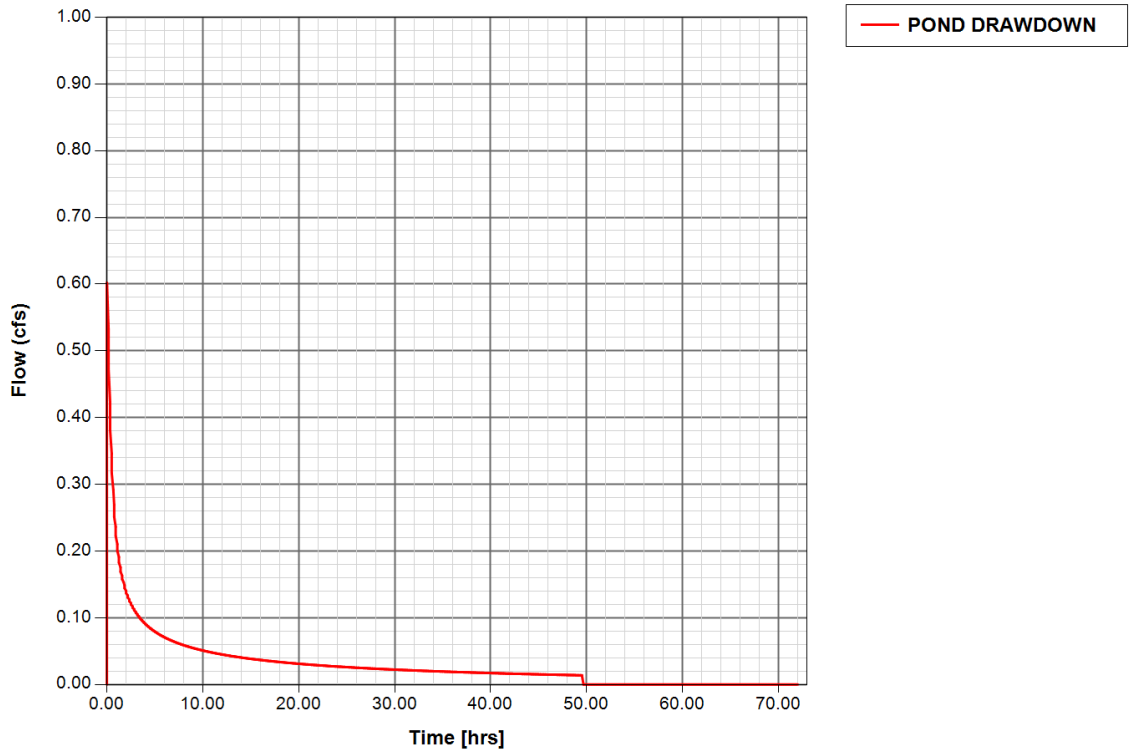
Comment:

Link Min/Max Conditions [Scenario1]

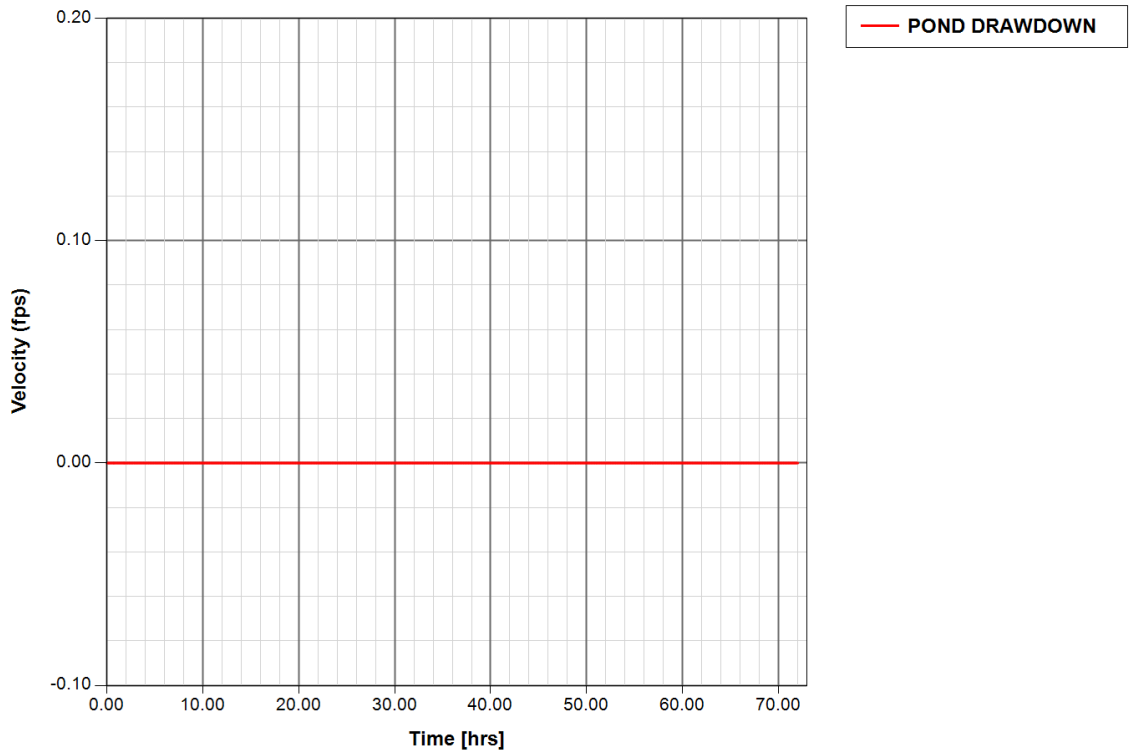
Link Name	Sim Name	Max Flow	Min Flow [cfs]	Min/Max	Max Us	Max Ds	Max Avg

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
POND PERC	POND DRAWDOWN	0.69	0.00	-0.01	0.00	0.00	0.00

Link Flow: POND PERC [Scenario1]



Link Average Velocity: POND PERC [Scenario1]



Simulation: POND DRAWDOWN

Scenario: Scenario1
Run Date/Time: 7/8/2022 10:46:30 AM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	30.0000	0.0500	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	30.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

		Conductivity Set:	
		Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	No Rainfall
Max dZ:	1.0000 ft	OF Region Rain Opt:	No Rainfall
Link Optimizer Tol:	0.0001 ft		
Edge Length Option:	Automatic		
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Perimeter Ring Exhibit

SHEET NO.

Paynes Prairie Preserve

SHEET TITLE
PERCOLATION INFLUENCE LINES
EXHIBIT

PROJECT TITLE
MODULAR OFFICE
SITE MODIFICATIONS

PROFESSIONAL REGISTRATION

DESIGNER :	ISSUE DATE: 01/25/2024	SYMBOL	REVISION	DATE	SYMBOL	REVISION	DATE
DRAWN BY:	COMP. FILE No.:	A			C		
REVIEWED BY:	STATE PROJECT No.:	B			D		

Consultant :
GPI
GREENMAN-PEDERSEN, INC.
ENGINEERING & CONSTRUCTION SERVICES
1590 VILLAGE SQUARE BLVD.
TALLAHASSEE FLORIDA 32309
PHONE (850) 668-5211
FAX (850) 668-5106
CERTIFICATE OF AUTHORIZATION NO.: 3498

Department of Environmental Protection
Division of Recreation and Parks
Bureau of Design and Construction
3800 Commonwealth Blvd., Tallahassee, FL 32399 (850) 245-2157

Appendix H:

Correspondance

James Sheets

From: Leslie McLendon <LMcLendon@alachuacounty.us>
Sent: Tuesday, December 19, 2023 1:13 PM
To: James Sheets
Cc: Shane Williams
Subject: Pollutant Load Calculations

Good afternoon,

The calculations are required per 77.28 unless the project is exempt under 77.25 or receives a waiver (small parcels and building additions) under 77.26.

Link to stormwater treatment code:
https://library.municode.com/fl/alachua_county/codes/code_of_ordinances?nodeId=PTIIADCO_TIT7HESA_CH77WAQUSTMAPR_ARTIIISTTRCO

You can contact Shane Williams (copied above) if you have any questions about this.

Thank you,
Leslie

Leslie McLendon, AICP
Senior Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 (office)

Appendix E:

Nutrient Loading Calculations

Complete Report (not including cost) Ver 4.3.5

Project: Paynes Prairie Modular Office
Date: 12/20/2023 9:34:46 AM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	Paynes Prairie Preserve State Park
Rainfall Zone	Florida Zone 2
Annual Mean Rainfall	52.00

Pre-Condition Landuse Information

Landuse	Rangeland/Parkland: TN=1.150 TP=0.055
Area (acres)	1.31
Rational Coefficient (0-1)	0.81
Non DCIA Curve Number	29.90
DCIA Percent (0-100)	100.00
Nitrogen EMC (mg/l)	1.150
Phosphorus EMC (mg/l)	0.055
Runoff Volume (ac-ft/yr)	4.592
Groundwater N (kg/yr)	0.140
Groundwater P (kg/yr)	0.140
Nitrogen Loading (kg/yr)	6.652
Phosphorus Loading (kg/yr)	0.451

Post-Condition Landuse Information

Landuse	Rangeland/Parkland: TN=1.150 TP=0.055
Area (acres)	1.31
Rational Coefficient (0-1)	0.81
Non DCIA Curve Number	29.90
DCIA Percent (0-100)	100.00
Wet Pond Area (ac)	0.00
Nitrogen EMC (mg/l)	1.150

Phosphorus EMC (mg/l)	0.055
Runoff Volume (ac-ft/yr)	4.592
Groundwater N (kg/yr)	0.990
Groundwater P (kg/yr)	0.990
Nitrogen Loading (kg/yr)	7.502
Phosphorus Loading (kg/yr)	1.301

Catchment Number: 1 Name: Paynes Prairie Preserve State Park

Project: Paynes Prairie Modular Office
Date: 12/20/2023

Retention Design

Retention Depth (in)	1.500
Retention Volume (ac-ft)	0.164

Watershed Characteristics

Catchment Area (acres)	1.31
Contributing Area (acres)	1.310
Non-DCIA Curve Number	29.90
DCIA Percent	100.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	52.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	11
Provided TN Treatment Efficiency (%)	82
Required TP Treatment Efficiency (%)	65
Provided TP Treatment Efficiency (%)	82

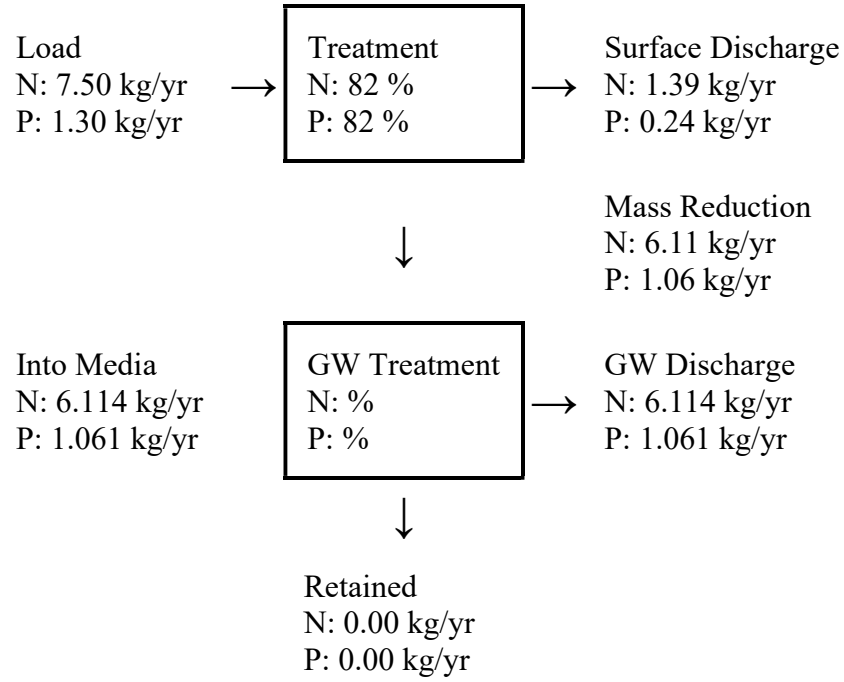
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

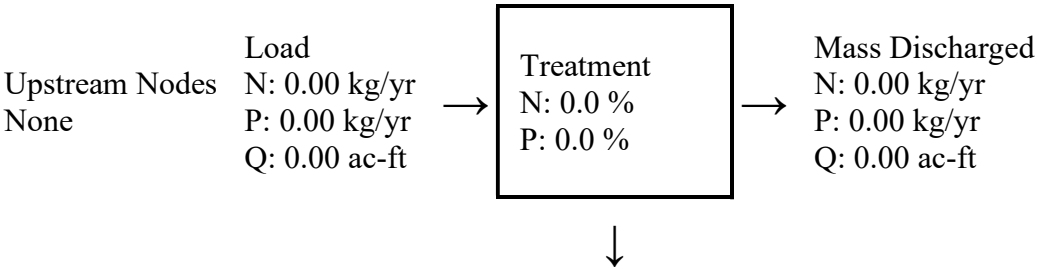
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	1.220
TN Mass Load (kg/yr)	6.114
TN Concentration (mg/L)	1.150
TP Mass Load (kg/yr)	1.061
TP Concentration (mg/L)	0.055

Load Diagram for Retention (stand-alone)



Load Diagram for Retention (As Used In Routing)



Mass Removed
N: 0.00 kg/yr
P: 0.00 kg/yr

Summary Treatment Report Version: 4.3.5

Project: Paynes Prairie
Modular Office

Analysis Type: Net Improvement

Date:12/20/2023

BMP Types:

Catchment 1 - (Paynes Prairie Preserve State Park) Retention
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Countywide Stormwater Code Affidavit of Compliance.

Instructions: Complete and submit this form for all activities that involve the construction of a stormwater management system. Please submit this form, along with the other required documents as listed in Sec. 77.28 of the Alachua County Code.

Part 1. Applicant Information

Applicant or Owner Name: Michael Foster
Company Name: FDEP - Bureau of Design and Const
Company Address: 200 Buckman Locks Rd Palatka Fl
Phone Number: 352-339-5101
Email Address: uyles.keen@dep.state.fl

Registered Professional Name: Colby Brown
Company Name: Greenman-Pedersen, Inc.
Company Address: 4300 Bayou Blvd., Suite 12, Pensacola
Phone Number: 850-450-2921
Email Address: colbybrown@gpinet.com

Part 2. Project Location Information

Project Name: Paynes Prairie State Park Modular Office
Tax Parcel: 16219-000-000
Project Location (Unincorporated Alachua County or Municipality):

Note: For projects located in Municipalities submittal of this form is a self-certification of compliance. An acknowledgement of receipt will be sent once all required documents are provided. This acknowledgement is not a review of the submitted materials. Projects in Unincorporated Alachua County will be reviewed pursuant to Sec. 77.27 of the Alachua County Code.

Part 3. Stormwater Discharge Information

Watershed Name: Un-named
Waterbody ID Number (WBID#):

Stormwater Discharge Locations Please Check all That Apply
❑ Project Discharges Offsite as Surface Flow
◪ Project Discharges Directly to Outstanding Florida Water
❑ Project is in the Watershed of a Waterbody Listed as Impaired for Nutrients or has a Nutrient TMDL
❑ Project Infiltrates to Groundwater
◪ Project is in the Sensitive Karst Area

Please briefly describe the Best Management Practices used:

A closed basin wetlands located to the northeast of the site on parcels 16215-006-000 and 16215-007-000. A dry retention pond is used to treat the proposed additional impervious area for this project. 1.31 acres total project area; 0.44 ac impervious area (34.2%); 0.75 ac pervious (57%); 0.12 ac retention area (8.8%); 0 ac wetlands

Part 4. Exemption and Waiver Information

If applicable, Please list the exemption(s) this project qualifies for under Sec. 77.25 of the Alachua County Code. Supporting Documentation may be required:

If applicable, Please describe the waiver you are requesting under Sec. 77.26 of the Alachua County Code. Supporting documentation is required:

Part 5. Signatures

I authorize Alachua County, and its agents and contractors, to enter the property for the purpose of verifying compliance. If the property is sold and/or the entity responsible for operation and maintenance of the stormwater management system, the Property Owner will notify the Alachua County Environmental Protection Department within 30 calendar days of the sale or change in operation and maintenance entity. Failure to comply may result in enforcement action using the provisions of Alachua County Code Chapter 24 or any other remedy available by law or equity.

Applicant/Owner Signature: Date:

I hereby certify that the above referenced project meets, or is exempt from, the requirements of the Alachua County Code Chapter 77, Article III Stormwater Treatment Code. I further certify that the Operation and Maintenance requirements have been provided to the owner and entity responsible for operation and maintenance of the stormwater management system.

Registered Professional Signature: Date:

Florida Registration Number: 63427

Interoffice Memorandum

To: SJRWMD

From: **Tim Stackhouse, PE**

Subject: Paynes Prairie State Park Modular Office – Desktop Environmental Assessment

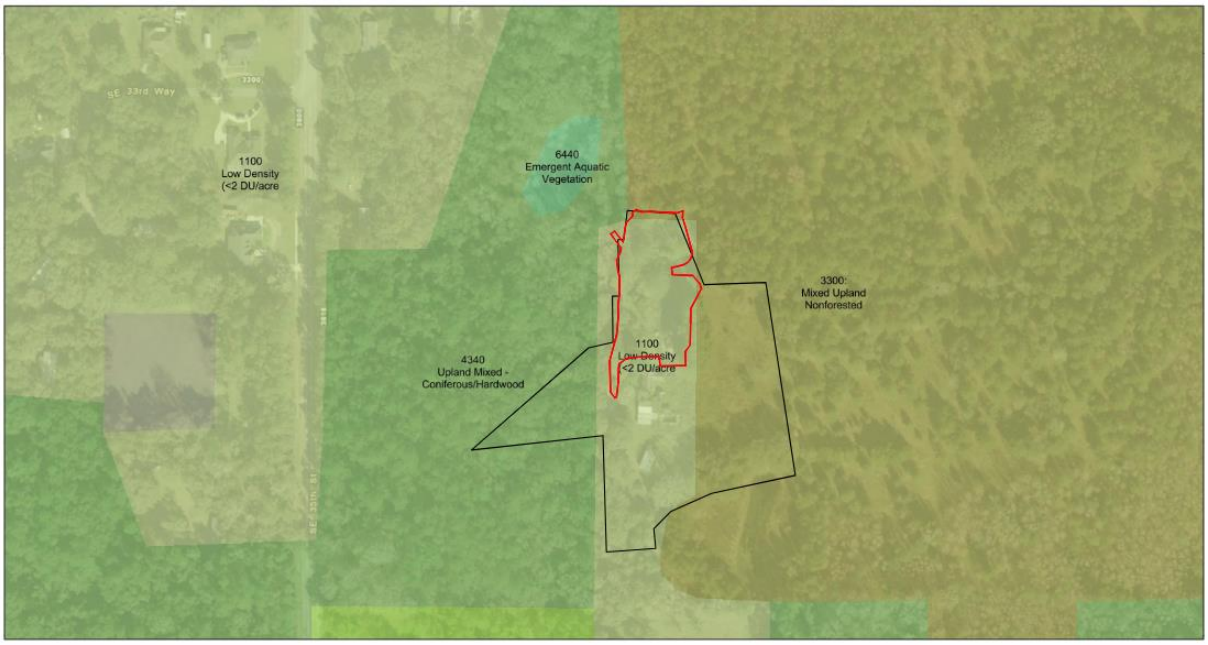
Date: **March 22, 2022**

CC: Click or tap here to enter text.

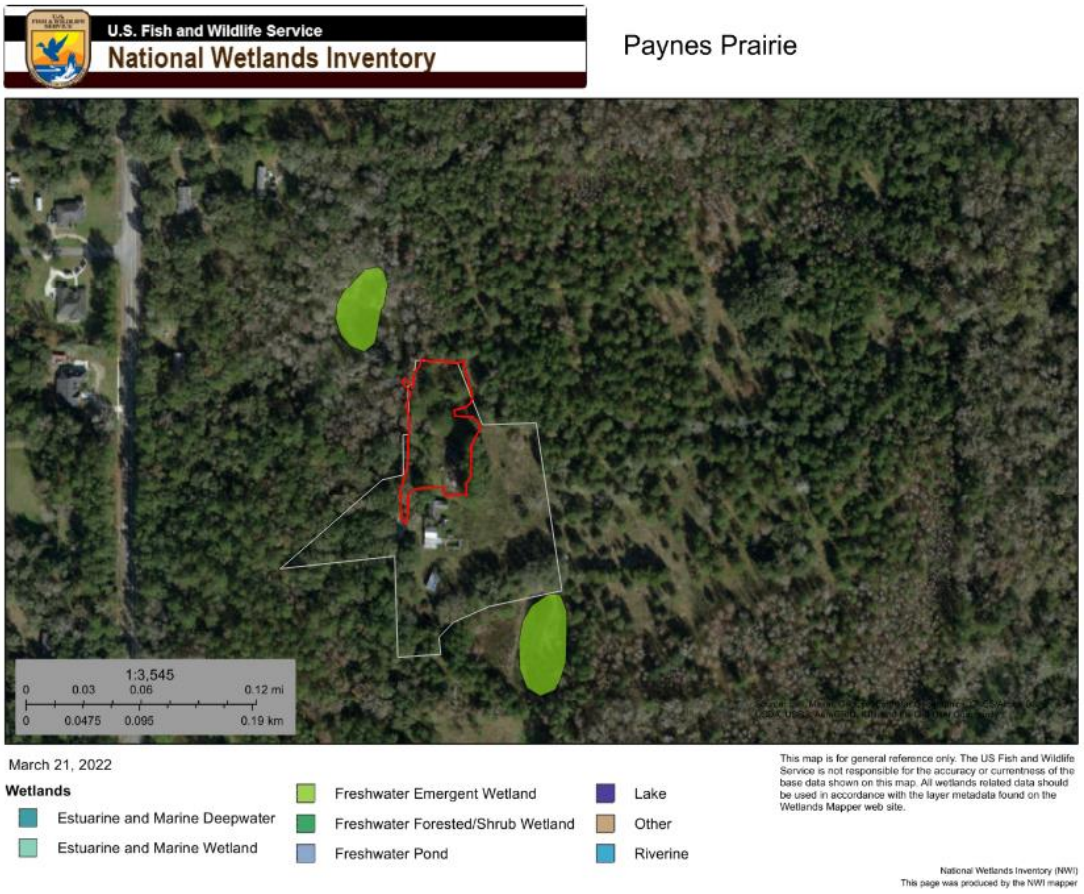
The Paynes Prairie State Park Modular Office project consists of the construction of a 1,750 sf modular office building and 1,440 sf garage/pole barn for park staff along with associated access, parking, all utilities, and a stormwater management facility. This 1.31-acre project site lies on the north portion of tax parcel 16219-000-000. This memorandum is provided to give information about the existing environmental features of the project area.

The project site is currently classified as low-density residential development and includes an existing single-family house, modular home, and tennis court. The house will not be impacted by the proposed construction, while the modular home and tennis court will be removed.

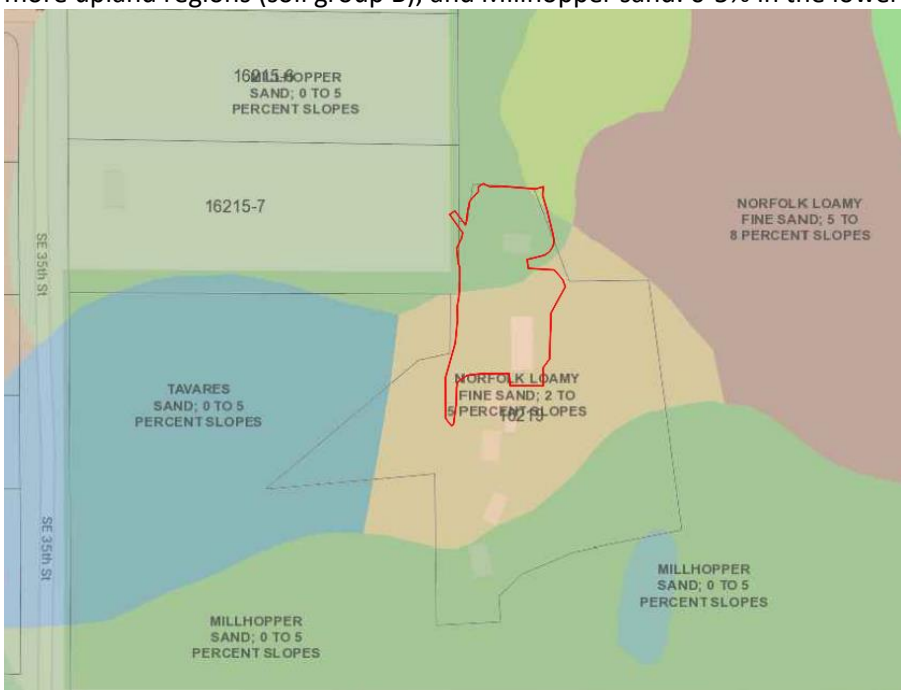
Below is a FLUCCS map for the project site. The site is described as Low Density (<2 DU/acre) developed land.



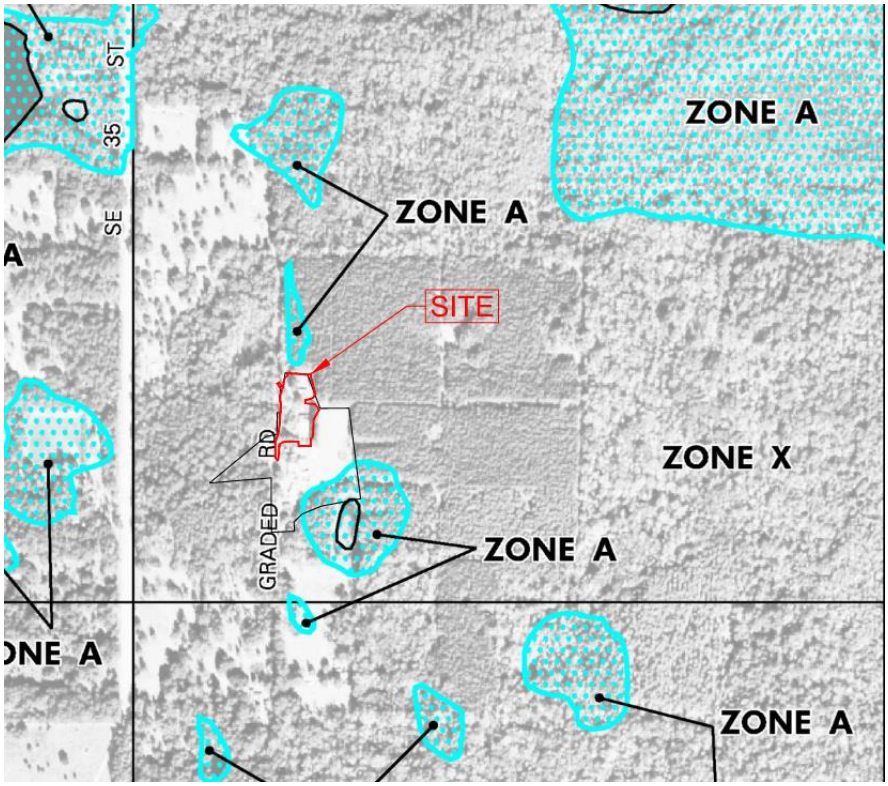
Below is a National Wetland Inventory map of the site. As shown in the map, there are no wetlands within the project extents.



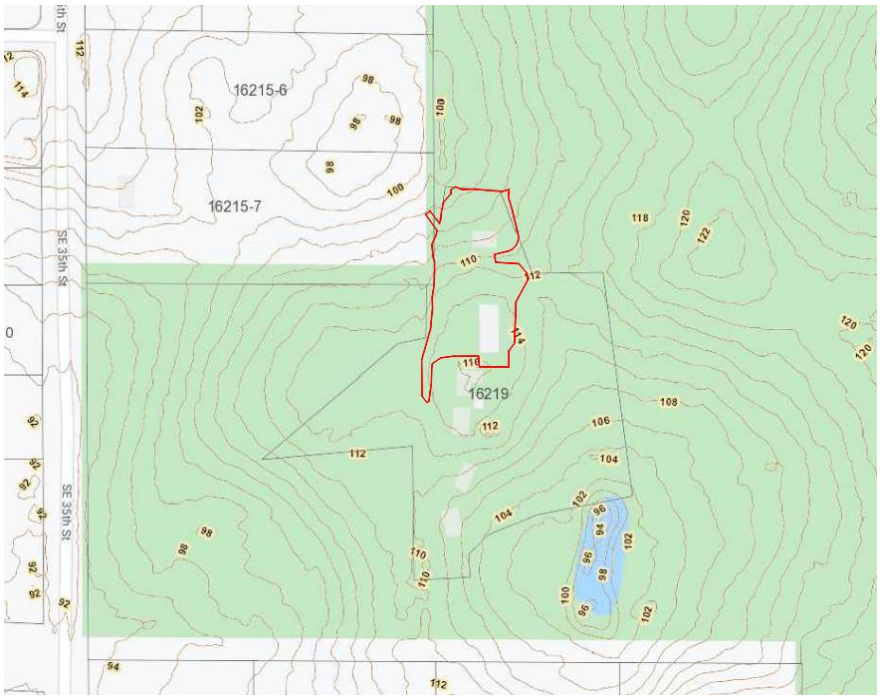
Below is a USGS soil map for the project area. The soils are described as Norfolk loamy fine sand: 2-5% slopes in the more upland regions (soil group B), and Millhopper sand: 0-5% in the lower elevations (soil group A).



Below is a portion of FEMA flood map panel #12001C0460D, effective date July 16, 2006. The entire project are is located in Zone X.



Below is a portion of the USGS topographic map for Gainesville East, showing the flat to moderate slopes on this site.



St. Johns River
Water Management District
Michael A. Register, P.E., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500 • www.sjrwmd.com

July 22, 2022

David Matson
FDEP
3900 Commonwealth Blvd STOP 520
Tallahassee, FL 32399-6575

SUBJECT: 180945-1
Paynes Prairie State Park Modular Office

Dear Sir/Madam:

Enclosed is your individual permit issued by the St. Johns River Water Management District on July 22, 2022. This permit is a legal document and should be kept with your other important documents. Permit issuance does not relieve you from the responsibility of obtaining any necessary permits from any federal, state, or local agencies for your project.

Technical Staff Report:
If you wish to review a copy of the Technical Staff Report (TSR) that provides the District's staff analysis of your permit application, you may view the TSR by going to the Permitting section of the District's website at www.sjrwmd.com/permitting. Using the "search applications and permits" feature, you can use your permit number or project name to find information about the permit. When you see the results of your search, click on the permit number and then on the TSR folder.

Noticing Your Permit:
For noticing instructions, please refer to the noticing materials in this package regarding closing the point of entry for someone to challenge the issuance of your permit. Please note that if a timely petition for administrative hearing is filed, your permit will become non-final and any activities that you choose to undertake pursuant to your permit will be at your own risk. Please refer to the attached Notice of Rights to determine any legal rights you may have concerning the District's agency action.

Compliance with Permit Conditions:
To submit your required permit compliance information, go to the District's website at www.sjrwmd.com/permitting. Under the "Apply for a permit or submit compliance data" section, click to sign-in to your existing account or to create a new account. Select the "Compliance Submittal" tab, enter your permit number, and select "No Specific Date" for the Compliance Due Date Range. You will then be able to view all the compliance submittal requirements for your project. Select the compliance item that you are ready to submit and then attach the appropriate information or form. The forms to comply with your permit conditions are available at www.sjrwmd.com/permitting under the section "Handbooks, forms, fees, final orders". Click on forms to view all permit compliance forms, then scroll to the ERP application forms section and

select the applicable compliance forms. Alternatively, if you have difficulty finding forms or need copies of the appropriate forms, please contact the Bureau of Regulatory Support at (386) 329-4570.

Transferring Your Permit:
Your permit requires you to notify the District within 30 days of any change in ownership or control of the project or activity covered by the permit, or within 30 days of any change in ownership or control of the real property on which the permitted project or activity is located or occurs. You will need to provide the District with the information specified in rule 62-330.340, Florida Administrative Code (F.A.C.). Generally, this will require you to complete and submit Form 62-330.340(1), "Request to Transfer Permit," available at http://www.sjrwmd.com/permitting/permitforms.html.

Please note that a permittee is liable for compliance with the permit before the permit is transferred. The District, therefore, recommends that you request a permit transfer in advance in accordance with the applicable rules. You are encouraged to contact District staff for assistance with this process.

Thank you and please let us know if you have additional questions. For general questions contact e-permit@sjrwmd.com or (386) 329-4570.

Sincerely,

Michelle Reiber

Michelle Reiber, Bureau Chief
Division of Regulatory Services
St. Johns River Water Management District
525 Community College Parkway, S.E.
Palm Bay, FL 32909
(321) 409-2129

Enclosures: Permit
Notice of Rights
List of Newspapers for Publication

cc: District Permit File

Megan R Collins
DEP

Timothy W. Stackhouse
Greenman Pedersen, Inc
1590 Village Square Blvd
Tallahassee, FL 32309-2748

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
Post Office Box 1429
Palatka, Florida 32178-1429

PERMIT NO: 180945-1 **DATE ISSUED:** July 22, 2022

PROJECT NAME: Paynes Prairie State Park Modular Office

A PERMIT AUTHORIZING:
Construction and operation of a Stormwater Management System for a 0.89-acre project known as Paynes Prarie State Park Modular Office as per plans received by the District on June 17, 2022.

LOCATION:
Section(s): 14 Township(s): 10S Range(s): 20E
Alachua County

Receiving Water Body:

Name	Class
Adjacent Unnamed Wetland	III Fresh, OFW

ISSUED TO:
FDEP
3900 Commonwealth Blvd STOP 520
Tallahassee, FL 32399-6575

The permittee agrees to hold and save the St. Johns River Water Management District and its successors harmless from any and all damages, claims, or liabilities which may arise from permit issuance. Said application, including all plans and specifications attached thereto, is by reference made a part hereof.

This permit does not convey to the permittee any property rights nor any rights or privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation or requirement affecting the rights of other bodies or agencies. All structures and works installed by permittee hereunder shall remain the property of the permittee.

This permit may be revoked, modified, or transferred at any time pursuant to the appropriate provisions of Chapter 373, Florida Statutes.

PERMIT IS CONDITIONED UPON:

See conditions on attached “Exhibit A”, dated July 22, 2022

AUTHORIZED BY: St. Johns River Water Management District
Division of Regulatory Services

By: _____
Melissa Parsons
Supervising Professional Engineer

"EXHIBIT A"
CONDITIONS FOR ISSUANCE OF PERMIT NUMBER 180945-1
Paynes Prairie State Park Modular Office
DATED July 22, 2022

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.

2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the District staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.

3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5, F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.

4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the District a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013) (http://www.flrules.org/Gateway/reference.asp?No=Ref-02505), incorporated by reference herein, indicating the expected start and completion dates. A copy of this form may be obtained from the District, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically or by mail to the Agency. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction under this chapter and, in such a case, submittal of Form 62-330.350(1) is not required.

5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.

6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:

    a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex — "Construction Completion and Inspection Certification for Activities Associated with a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or

    b. For all other activities — "As-Built Certification and Request for Conversion to Operation Phase" [Form 62-330.310(1)].

c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.

7. If the final operation and maintenance entity is a third party:

   a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as-built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.4 of Volume I) as filed with the Florida Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.

   b. Within 30 days of submittal of the as- built certification, the permittee shall submit "Request for Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity" [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.

8. The permittee shall notify the District in writing of changes required by any other regulatory District that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.

9. This permit does not:

   a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;

   b. Convey to the permittee or create in the permittee any interest in real property;

   c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or

   d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.

10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.

11. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.

12. The permittee shall notify the District in writing:

    a. Immediately if any previously submitted information is discovered to be inaccurate; and

    b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall

request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

13. Upon reasonable notice to the permittee, District staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

14. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850) 245-6333, as well as the appropriate permitting agency office. Project activities shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the District will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with Rule 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

19. This permit for construction will expire five years from the date of issuance.

20. At a minimum, all retention and detention storage areas must be excavated to rough grade prior to building construction or placement of impervious surface within the area to be served by those facilities. To prevent reduction in storage volume and percolation rates, all accumulated sediment must be removed from the storage area prior to final grading and stabilization.

21. The operation and maintenance entity shall inspect the stormwater or surface water management system once within two years after the completion of construction and every two years thereafter to determine if the system is functioning as designed and permitted.

The operation and maintenance entity must maintain a record of each required inspection, including the date of the inspection, the name and contact information of the inspector, and whether the system was functioning as designed and permitted, and make such record available for inspection upon request by the District during normal business hours. If at any time the system is not functioning as designed and permitted, then within 30 days the entity shall submit a report electronically or in writing to the District using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," describing the remedial actions taken to resolve the failure or deviation.

22. This permit does not authorize the permittee to cause any adverse impact to or "take" of state listed species and other regulated species of fish and wildlife. Compliance with state laws regulating the take of fish and wildlife is the responsibility of the owner or applicant associated with this project. Please refer to Chapter 68A-27 of the Florida Administrative Code for definitions of "take" and a list of fish and wildlife species. If listed species are observed onsite, FWC staff are available to provide decision support information or assist in obtaining the appropriate FWC permits. Most marine endangered and threatened species are statutorily protected and a "take" permit cannot be issued. Requests for further information or review can be sent to FWCConservationPlanningServices@MyFWC.com.

23. All wetland areas or water bodies that are outside the specific limits of construction authorized by this permit must be protected from erosion, siltation, scouring or excess turbidity, and dewatering.

24. The proposed project must be constructed and operated as per plans and calculations received by the District on June 17, 2022.

25. This permit does not authorize impacts to wetlands or other surface waters.

Notice Of Rights

1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-six (26) days of the District depositing the notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing the notice of District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 4 below.

2. Please be advised that if you wish to dispute this District decision, mediation may be available and that choosing mediation does not affect your right to an administrative hearing. If you wish to request mediation, you must do so in a timely-filed petition. If all parties, including the District, agree to the details of the mediation procedure, in writing, within 10 days after the time period stated in the announcement for election of an administrative remedy under Sections 120.569 and 120.57, Florida Statutes, the time limitations imposed by Sections 120.569 and 120.57, Florida Statutes, shall be tolled to allow mediation of the disputed District decision. The mediation must be concluded within 60 days of the date of the parties' written agreement, or such other timeframe agreed to by the parties in writing. Any mediation agreement must include provisions for selecting a mediator, a statement that each party shall be responsible for paying its pro-rata share of the costs and fees associated with mediation, and the mediating parties' understanding regarding the confidentiality of discussions and documents introduced during mediation. If mediation results in settlement of the administrative dispute, the District will enter a final order consistent with the settlement agreement. If mediation terminates without settlement of the dispute, the District will notify all the parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Florida Statutes, is resumed. Even if a party chooses not to engage in formal mediation, or if formal mediation does not result in a settlement agreement, the District will remain willing to engage in informal settlement discussions.

3. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

Notice Of Rights

4. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8:00 a.m. on the District's next regular business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at *sjrwmd.com*. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.

5. Failure to file a petition for an administrative hearing within the requisite timeframe shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).

6. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District's final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.

7. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

8. A District action is considered rendered, as referred to in paragraph no. 7 above, after it is signed on behalf of the District and filed by the District Clerk.

9. Failure to observe the relevant timeframes for filing a petition for judicial review as described in paragraph no. 7 above will result in waiver of that right to review.

NOTICING INFORMATION

Please be advised that the St. Johns River Water Management District will not publish a notice in the newspaper advising the public that it has issued a permit for this project.

Newspaper publication, using the District's notice form, notifies members of the public of their right to challenge the issuance of the permit. If proper notice is given by newspaper publication, then there is a 21-day time limit for someone to file a petition for an administrative hearing to challenge the issuance of the permit.

To close the point of entry for filing a petition, you may publish (at your own expense) a one-time notice of the District's decision in a newspaper of general circulation within the affected area as defined in Section 50.011 of the Florida Statutes. If you do not publish a newspaper notice to close the point of entry, the time to challenge the issuance of your permit will not expire and someone could file a petition even after your project is constructed.

A copy of the notice form and a partial list of newspapers of general circulation are attached for your convenience. However, you are not limited to those listed newspapers. If you choose to close the point of entry and the notice is published, the newspaper will return to you an affidavit of publication. In that event, it is important that you either submit a scanned copy of the affidavit by emailing it to *compliancesupport@sjrwmd.com* (preferred method) **or** send a copy of the original affidavit to:

Office of Records and Regulatory Support
4049 Reid Street
Palatka, FL 32177

If you have any questions, please contact the Office of Records and Regulatory Support at (386) 329-4570.

NOTICE OF AGENCY ACTION TAKEN BY THE
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Notice is given that the following permit was issued on _____:

(Name and address of applicant)_____
permit#_____. The project is located in _____County, Section _____, Township _____ South, Range _____ East. The permit authorizes a surface water management system on _____ acres for _____ known as _____. The receiving water body is _____.

A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code (F.A.C.), the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P.O. Box 1429, Palatka FL 32178-1429 (4049 Reid St, Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes (F.S.), and Chapter 28-106, F.A.C. The District will not accept a petition sent by facsimile (fax). Mediation pursuant to Section 120.573, F.S., may be available and choosing mediation does not affect your right to an administrative hearing.

A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8 a.m. – 5 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8 a.m. on the District's next regular business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sjrwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile (fax) is prohibited and shall not constitute filing.

The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. **Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, F.A.C.).**

If you wish to do so, please visit http://www.sjrwmd.com/nor_dec/ to read the complete Notice of Rights to determine any legal rights you may have concerning the District's decision(s) on the permit application(s) described above. You can also request the Notice of Rights by contacting the Director of Office of Records and Regulatory Support, 4049 Reid St., Palatka, FL 32177-2529, tele. no. (386)329-4570.

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GRU
More than Energy

GAINESVILLE REGIONAL UTILITIES

Water & Wastewater Engineering

Mr. Colby Brown, PE
Greenman-Pedersen, Inc.

Mr. Brown:

GRU cannot provide water and/or sewer service to the Paynes Prairie site at 3623 SE 35th St (Parcel # 16219-000-000). The closest GRU sewer facilities are over 5000 LF from the site and it is infeasible to flow from the Paynes Prairie site to a GRU connection point by gravity. Water facilities are also over 5000 LF and would be cost prohibitive to connect to GRU water. Due to the inability to connect to GRU facilities, GRU is in agreement that site well water and a septic tank/drain field is the most suitable option.

Regards,

Barbara J. Misener, PE/PMP
Supervising Utility Engineer
Gainesville Regional Utilities
PO Box 147117
Gainesville, FL 32614
(352) 393-1613

Cc: Jacob Stout – Alachua County
Todd Harris – Department of Health

From: Harris, Todd S <Todd.Harris@flhealth.gov>
Sent: Thursday, January 18, 2024 7:33 AM
To: Colby Brown; Jacob Stout
Cc: Keen, Uyles (JR)
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Good morning,

Comments in original email body below.

Thank you,

Todd Harris
Environmental Manager
Florida Department of Health in Alachua, Bradford, and Union County
224 SE 24th St.
Gainesville, FL 32641
Office 352-334-7930
Fax 352-334-7935

From: Colby Brown <colbybrown@gpinet.com>
Sent: Thursday, January 18, 2024 8:00 AM
To: Harris, Todd S <Todd.Harris@flhealth.gov>
Cc: Jacob Stout <jstout@alachuacounty.us>; Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Subject: FW: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Todd

The Paynes Prairie Site is planning for on site well water and a septic tank / drain field. I am requesting an email from you stating that this is acceptable. Attached is the Plan Set (see sheet 9, in particular) and below is an aerial with the overall site location in proximity to SE 35th St. which is likely where centralized water and sewer facilities are located. The proposed modular office building location is approximately 950 linear feet, along the dirt drive, to SE 35th St.

1. We understand that the Drain field must be a min of 100' from the Well. Is the septic tank required to be 100' from the Well, as well? Yes; any part of the OSTDS
2. The comments noted a 75' distance from the Pond to the septic tank and drain field, is that required? Only if wet basin; dry basin is a 15 ft. setback. I have no knowledge of the soil drainage in this plan or design and if the estimated seaonal high water table is shallower than the bottom of the basin it may be viewed as an artificial permanent non tidal surface water body triggering the 75 ft. setback.
3. The comments noted a Design High Water elevation of 105.5 and that the pond is a wet basin. The high water elevation in the pond is 107.5 and the pond is designed as a dry basin. Noted
4. Is the well required to be 100' from the proposed dry pond? Get a determination from the appropriate water management district on that. It is likely that the basin is a sanitary hazard per 62-532 FAC and would require the setback.
5. The proposed drain field is currently designed to be mounded about 1' on the low end. This can be raised as necessary.

Note: the Health Department cannot waive any available sewer connection for new construction. If sewer is available (which appears unlikely) then legislative intent is for connection. Get a sewer availability determination letter from the public utility GRU.

Let me know.

Excerpt from comments from Alachua DR

1. Please note that via email on 1/16/2024, Todd Harris Environmental Manager with the Florida Department of Heal
concerns. Please coordinate with the Health Department ASAP to confirm any revisions to the location of the septi
- Septic tank shown less than 100 ft. to what will be a Limited Use Commercial Well.
- Septic tank septic system not shown 75 ft. from the design high water 105.5′ elevation for the proposed stormw
a pre 1972 plat date grandfather reduction is not in play and that it is a wet basin. I do not know if EPD would req
basin.
- The well is located less than 100 ft. from the proposed basin/pond.
- If this becomes a mounded Drainfield due to site soil conditions there could be filling and that may need to be co
relation to the noted wetland line.

If changes are necessary, they must be made within the "developable area" outlined in the civil plans.

GPI
Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Jacob Stout <jstout@alachuacounty.us>
Sent: Wednesday, January 17, 2024 3:38 PM
To: Colby Brown <colbybrown@gpinet.com>
Cc: developmentreview <developmentreview@alachuacounty.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Good afternoon Colby,

Attached is the template for the deed restriction, two will be necessary. One for water and one for sewer.

Todd Harris, todd.harris@flhealth.gov, is the contact that can provide the letter (an email from him is sufficient) to satisfy the exception to centralized water and sewer from Alachua County Health Department.

Barbara Misener, misenerbj@gru.com, is the contact that can provide the same exception to centralized water and sewer from GRU.

Please let me know if you would like a meeting with GM/EPD staff to discuss the comments. I also copied the reviewers in the automated email.

I will be out of the office tomorrow from around 1:00 p.m. – 3:00 p.m. ET for a hearing, otherwise I will do my best to help you with any questions.

Alachua County, Florida
WHERE NATURE AND CULTURE MEET

Jacob Stout
Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 ext. 2320 (office) • 352-338-3224 (fax)

communications, including your e-mail address, may be disclosed to the public and media at any time.

From: alachuacounty-no-reply@citizenserve.com <alachuacounty-no-reply@citizenserve.com>
Sent: Wednesday, January 17, 2024 4:31 PM
To: colbybrown@gpinet.com
Cc: developmentreview <developmentreview@alachuacounty.us>; Chris Dawson <cdawson@alachuacounty.us>; Emily Rodriguez <erodriguez@alachuacounty.us>; Ken McMurry <kmcmurry@alachuacounty.us>; David Tooke <dtooke@alachuacounty.us>; Shane Williams <eswilliams@alachuacounty.us>; Silver Ware <sware@alachuacounty.us>
Subject: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Alachua County
Development Review Staff
Project Acceptance
Project Number: DR23-000065
Date: 01/17/2024

Minor Insufficiencies Paynes Prairie Preserve Modular Office Site Modifications

Staff has the following minor comments for Paynes Prairie Preserve Modular Office Site Modifications. To be eligible for a hearing we will need the following items addressed. Once these have items have been addressed, we can consider this application complete, and ready for a hearing. Please respond by **1:00 p.m., Thursday 1/18/2024**, that you will be able to make these changes and provide revised plans by **12:00 p.m., Thursday 1/25/2024**.

Development Services - Development Plan Review: Jacob Stout

1. Please note that via email on 1/16/2024, Todd Harris Environmental Manager with the Florida Department of Health raised the following concerns. Please coordinate with the Health Department ASAP to confirm any revisions to the location of the septic system and drainfield:
   - Septic tank shown less than 100 ft. to what will be a Limited Use Commercial Well.
   - Septic tank septic system not shown 75 ft. from the design high water 105.5’ elevation for the proposed stormwater pond. This assumes a pre 1972 plat date grandfather reduction is not in play and that it is a wet basin. I do not know if EPD would require 75 ft. or not to wet basin.
   - The well is located less than 100 ft. from the proposed basin/pond.
   - If this becomes a mounded Drainfield due to site soil conditions there could be filling and that may need to be considered by EPD in relation to the noted wetland line.

   If changes are necessary, they must be made within the "developable area" outlined in the civil plans.

2. Additional documentation is needed to satisfy Section 407.109. Please provide a letter from GRU and Alachua County Health Department that address the infeasibility of connecting to centralized potable water and sanitary sewer system [407.109(b) and 407.109(c)]. Staff will provide contact information. Provide a note on the Utility Plan (Sheet 9) that states

"connection to centralized potable water and sanitary sewer will be provided once it becomes feasible and shall utilize low-flow or ultra-low flow plumbing fixtures and shall use the St. John's River Water Management District's Water Star standards as the minimum standard for water use" [407.109(d)(1, 3, & 4)].

3. Please include 2 bicycle parking spaces (ex. 1 "u" rack) to satisfy Section 407.15(b)(1): A minimum of one (1) bicycle parking space shall be provided for every ten (10) required vehicular spaces or two (2) spaces for each public and employee entrance, whichever is greater. Please also note location requirements in Section 407.15(c) when siting the bicycle spaces.

4. On Sheet 7, please remove "architectural" from the note to refer to the architectural building plans. Architectural elevations are often a required component that are reviewed by the DRC for non-residential projects. Elevations are not required for this project and staff wants to avoid potential confusion with the referenced notes. A note to refer to building plans is sufficient.

5. Please note the following *Condition of Approval*: "The applicant shall complete and record a deed restriction prior to the issuance of Construction Permit affirming that the property will abandon any on-site private wells and septic systems and connect to a centralized system when feasible per ULDC Section 407.109(d)(2)." Staff will provide templates

Development Services - County Forester and Landscape Inspector: Ken McMurry

6. A temporary automatic irrigation system is required for all new required landscaping, per 407.46(a). Temporary irrigation systems must be removed once the plants are established or within one year, whichever occurs first. All irrigation systems are required to have a functioning rainfall shutoff device set to active even during establishment, per 407.46(a)4. All newly planted trees shall have individual low flow or micro-irrigation supplies, per 407.46(a)3. Prior to the installation of a new permanent irrigation system or addition to an existing system, an irrigation plan must be submitted to and approved by the Alachua County Environmental Protection Department through Citizenserve. The irrigation system shall comply with the Landscape Irrigation Design and Maintenance Standards found in Article VI of Part II, Title 7, Chapter 77 of the Alachua County Code, which among additional design standards, limit irrigation to 50% of the permeable area. For more information, visit the Irrigation Design Standards website or contact the Alachua County Environmental Protection Department at 352-264-6800. A temporary irrigation system instead of a permanent system is strongly encouraged. Here is a link to a temporary irrigation guidance document – https://alachuacounty.us/Depts/epd/WaterResources/WaterConservation/Documents/ADACompliant/Temporary%20Irrigation%20Guidance%20Document_V%208-25-23_ADA.pdf. An added incentive is the avoidance of commercial irrigation systems registration and annual inspection/maintenance requirement.

7. Include calculations demonstrating canopy trees spaced no more than an average of every 35 linear feet around the basin perimeter, and at least 25 percent of the area of the basin, including the shoulders and maintenance area, using native landscape plantings, excluding sod, 407.92(b)(1).

Growth Management - Transportation Planning: Chris Dawson

8. The subject application proposes to remove an existing 660 sq. ft. residence and add a modular office structure. The new structure will be subject to the County's impact fees and mobility fee. Fire Impact fee credit for the existing home is $56.43. The modular office building is shown as 1,750 sq. ft. Fire Impact Fees for the new building would be $149.63. After applying the credit, the net Fire Impact Fee will be $93.20. Mobility Fee credit for the existing home is at the rate of $1,761 per ksf, or $1,162.26. The office building Mobility Fee rate is $2,936 per ksf, or $5,138. After applying the credit, the net Mobility Fee will be

$3,975.74. These fees are due prior to CO, and will be assessed on the building permit for the modular structure.

Environmental Protection Department - Development Plan Review: Emily Rodriguez

9. The applicant has submitted a memo from the Department of Historic Resources recommending professional archeological monitoring during ground-disturbing activities and shall comply with that recommendation.

10. The applicant shall obtain all required state and federal permits prior to commencement of the development. Upon issuance of a required state or federal permit, the applicant shall furnish a copy of such permit to the applicable County department.

11. The proposed office and all other construction activities will be located outside of required wetland buffers.
12. Hold the Certificate of Occupancy for the office building pending receipt of the required Well Registration Form and copy of the Well Completion Report by the Alachua County Environmental Protection Department.

13. In order to protect the wetland buffer during construction, add the following note to the plans, "No filling, excavation, alteration, or construction activity shall be permitted in the wetland buffer; except for such specific exempt activities authorized by the Alachua County Environmental Protection Department."

14. Revise the plans to show a protective barrier, such as high visibility netting, around the existing shed with water well.

15. Revise the plans to show a tree barricade along the north side of the dirt drive in order to protect the minimum wetland buffer during construction.

16. For any proposed site plan modifications, please note: Surface waters and/or wetlands exist on the property. All development activities are prohibited in these areas and their associated buffers without prioer aurhtorization by the Alachua County Environmental Protection department [Article VI, Chapter 406, ULDC].

Environmental Protection Department - Chapter 77 Stormwater Treatment Code: Shane Williams

16. Section 77.27(b) of the stormwater treatment code requires that nitrogen and phosphorus be reduced by 95% when directly discharged into OFWs. However, because the wetlands that discharge is occurring to are considered an OFW simply because they are in a State Park, the 70/80% criteria in 77.27(a) will be sufficient. This would be considered an alternative compliance and should be noted on the affidavit of compliance in Part 3.

Public Works - Development Plan Review: David Tooke

17. Provide access location to public street SE 35th Street.

Alachua County Fire Rescue
Harold Theus, Chief

December 14, 2022

To whom it may concern:

Alachua County Fire Rescue was requested to review a project for the Florida Department of Environmental Protection. The project location is 3623 SE 35th St. in Gainesville, Fl. 32641. Since this is a State of Florida facility, ACFR does not have jurisdiction. However, it was noted that the project calls for a 10,000-gallon water tank to provide water for firefighting. ACFR currently holds the Hauled Water Certification from ISO. This means that any building located within 5 travel miles of an ACFR station does not need to meet the onsite water supply requirements. This is contingent on the needed fire flow for any one building does not exceed 30,000 gallons as calculated using NFPA 1142.

The listed address for the project is 2.2 miles from ACFR Station 60 (1320 SE 43rd St. Gainesville, Fl. 32607). This qualifies the listed address for the hauled water option instead of requiring a tank. Since ACFR does not have jurisdiction with this project, the State Fire Marshal's Office will need to have the final approval for this change.

If you have any questions, please feel free to contact our office.

Sincerely,

John Adler

John Adler
Fire Marshal / Division Chief
352-384-3107 (office)
863-781-1452 (mobile)

From: Silver Ware <sware@alachuacounty.us>
Sent: Thursday, November 9, 2023 5:33 AM
To: Colby Brown
Cc: Chris Daniels
Subject: RE: Paynes Prairie Fire Access

Good morning

Yes it does.

Thank you

Chip

From: Colby Brown <colbybrown@gpinet.com>
Sent: Wednesday, November 8, 2023 8:00 AM
To: Silver Ware <sware@alachuacounty.us>
Cc: Chris Daniels <cdaniels@gpinet.com>
Subject: RE: Paynes Prairie Fire Access

Chip

Please see the attached Autoturn for the Fire Safety vehicle in the program that most closely matches the specs that you sent. We will likely modify the limits of the gravel area as noted in red.

Is this acceptable to you?

GPI
Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Silver Ware <sware@alachuacounty.us>
Sent: Tuesday, November 7, 2023 5:12 AM
To: Colby Brown <colbybrown@gpinet.com>
Subject: RE: Paynes Prairie Fire Access

Good morning

The ACFR Truck specifications we spoke of yesterday.

Thank you

Chip

Silver Ware
Fire Prevention Officer
Fire Rescue
911 SE 5th ST • Gainesville • FL • 32601
352-384-3121 (office) • 352-494-3140 (mobile) • 352-384-3157 (fax)

From: Colby Brown <colbybrown@gpinet.com>
Sent: Monday, November 6, 2023 12:18 PM
To: Silver Ware <sware@alachuacounty.us>
Subject: Paynes Prairie Fire Access

It was good to chat with you earlier today. Please send me the specs on the 80k# 45’ long, 12’ wide fire truck as soon as you are able.

Colby Brown, P.E.
Senior Project Manager

4300 Bayou Boulevard, Suite 12, Pensacola, FL 32503
d 850.297.2929 | c 850.450.2921
colbybrown@gpinet.com | www.gpinet.com

GPI Engineering | Design | Planning | Construction Inspection

Greenman-Pedersen, Inc.
An Equal Opportunity Employer

From: Daniel Gilmore <DGilmore@sjrwmd.com>
Sent: Monday, January 22, 2024 7:39 AM
To: 'Harris, Todd S'; Colby Brown; Jacob Stout
Cc: Keen, Uyles (JR)
Subject: RE: Well Location in Proximity to Building - Paynes Prairie Preserve Modular Office Site Modifications

Good Morning All,

After conferring with Mike Turner, the existing well can remain at its current location due to its permitting pre-dating the ERP pond permit. ERP isn't my expertise but apparently ERP rules do not have setback requirements with permitted ponds from existing wells.

If anyone has any questions, I can do my best to answer any questions or find the answer for you.

Daniel Gilmore
Hydrologist IV
Bureau of Water Use Regulation
St. Johns River Water Management District
P.O. Box 1429 ● Palatka, FL 32178-1429
Office: (386) 643-1949
Cell: (904) 666-3642
Fax: (386) 329-4490
Email: dgilmore@sjrwmd.com
Website: www.sjrwmd.com
Connect with us: Newsletter, Facebook, Twitter, Instagram, YouTube, Pinterest

www.sjrwmd.com/ePermit

From: Harris, Todd S <Todd.Harris@flhealth.gov>
Sent: Friday, January 19, 2024 7:01 PM
To: Colby Brown <colbybrown@gpinet.com>; Jacob Stout <jstout@alachuacounty.us>
Cc: Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>; Daniel Gilmore <DGilmore@sjrwmd.com>
Subject: RE: Well Location in Proximity to Building - Paynes Prairie Preserve Modular Office Site Modifications

Good evening,

Will certainly defer to Mr. Gilmore as the well permitting authority, but in the interim, that setback distance may be dictated from the determination if this barn area has any requirement (or election) for a termiticide pesticide application of the slab (if applicable) surface area of the structure. If so, please consult with your builder in determination of their pesticide applicator and what product they use for

such wood destroying organism prevention, and then setback the well distance per that products EPA approval.

I trust that a new well proposal is a simpler or perhaps more economical option than redesigning the storm water basin location. Please be advised, however, that the additional cost for a new Limited Use Public well, and associated system components, will be significantly more costly than trying to repurpose the existing water well; especially if the existing water well is older than 1993.

Best,

Todd Harris
Environmental Manager
Florida Department of Health in Alachua, Bradford, and Union County
224 SE 24th St.
Gainesville, FL 32641
Office 352-334-7930
Fax 352-334-7935

From: Colby Brown <colbybrown@gpinet.com>
Sent: Friday, January 19, 2024 6:39 PM
To: Daniel Gilmore <DGilmore@sjrwmd.com>
Cc: Jacob Stout <jstout@alachuacounty.us>; Harris, Todd S <Todd.Harris@flhealth.gov>; Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Subject: RE: Well Location in Proximity to Building - Paynes Prairie Preserve Modular Office Site Modifications

Dan

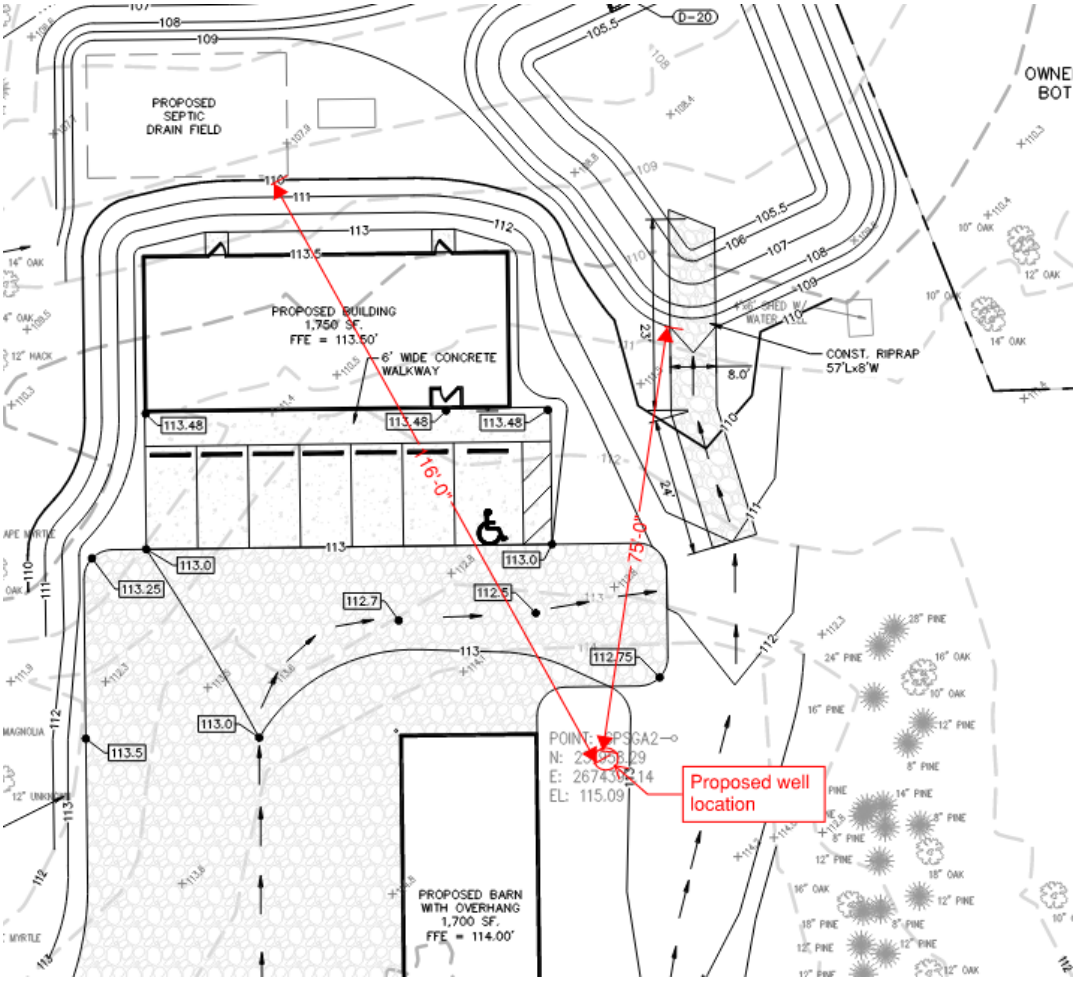
Please see below for the proposed location of the well. I could not find any direction regarding proximity to the pole barn structure. How close to the building can the well be? We would like to enclose the well with a lean-to type structure adjacent to the Barn. The current location is approximately 12’ off the building in the layout below.

Let me know if you see any issues with the location or closer to the building in the image below..

GPI
Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Colby Brown
Sent: Friday, January 19, 2024 10:22 AM
To: Harris, Todd S <Todd.Harris@flhealth.gov>; Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Cc: Jacob Stout <jstout@alachuacounty.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications - Pond Setbacks / GRU response

Todd
I spoke with Dan Gilmore with SJRWMD, Wesley Curtis has retired, and he confirmed that there will need to be a 75' setback. He mentioned a variance that can be requested as long as all other efforts to meet the set back are exhausted. The first recommendation is to abandon the existing well and install a new well 75' from the pond. Below is my thought. Would this be reasonable?



Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Harris, Todd S <Todd.Harris@flhealth.gov>
Sent: Thursday, January 18, 2024 6:01 PM
To: Colby Brown <colbybrown@gpinet.com>; Jacob Stout <jstout@alachuacounty.us>

Cc: Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications - Pond Setbacks / GRU response

Good evening,

Thank you for the information. When this well is put online for the new limited public use, the water system will require clearance testing and approval as at least a Limited Use Commercial Registered water system under the Dept. of Health per 64E-8 FAC.. For this reason, and for the current discussion, please obtain an email or letter from Wesley Curtis (or delegate) at SJRWMD identifying that the setback from the existing well and proposed basin is acceptable and not a Moderate Sanitary Hazard as referenced prior.

I saw the email from GRU regarding the distance and sewer unavailability; consider this acceptable that municipal water and sewerage is not an option for this site as far as the Health Department is concerned.

Best,

Todd Harris
Environmental Manager
Florida Department of Health in Alachua, Bradford, and Union County
224 SE 24th St.
Gainesville, FL 32641
Office 352-334-7930
Fax 352-334-7935

From: Colby Brown <colbybrown@gpinet.com>
Sent: Thursday, January 18, 2024 4:51 PM
To: Harris, Todd S <Todd.Harris@flhealth.gov>
Cc: Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>; Jacob Stout <jstout@alachuacounty.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications - Pond Setbacks / GRU response

Todd

Appreciate the info below.

We are working on incorporating your concerns.

Pond to Drinking Well Setback - I have communicated with FDEP Water Resources and with the SJRWMD and after reviewing Table #1 Part B 62-532, we believe that the type of facility (small building, pole barn, and gravel parking lot) that the stormwater detention pond is treating does not pose a moderate risk to the ground water, is therefore, not considered a Sanitary Hazard and would not be required to meet the 75' setback.

Also, I spoke with GRU and we plan to receive the approval from GRU that connection to central water and sewer are not feasible for this project.

Thanks for all your assistance.

GPI
Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Harris, Todd S <Todd.Harris@flhealth.gov>
Sent: Thursday, January 18, 2024 7:33 AM
To: Colby Brown <colbybrown@gpinet.com>; Jacob Stout <jstout@alachuacounty.us>
Cc: Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Good morning,

Comments in original email body below.

Thank you,

Todd Harris
Environmental Manager
Florida Department of Health in Alachua, Bradford, and Union County
224 SE 24th St.
Gainesville, FL 32641
Office 352-334-7930
Fax 352-334-7935

From: Colby Brown <colbybrown@gpinet.com>
Sent: Thursday, January 18, 2024 8:00 AM
To: Harris, Todd S <Todd.Harris@flhealth.gov>
Cc: Jacob Stout <jstout@alachuacounty.us>; Keen, Uyles (JR) <Uyles.Keen@dep.state.fl.us>
Subject: FW: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Todd

The Paynes Prairie Site is planning for on site well water and a septic tank / drain field. I am requesting an email from you stating that this is acceptable. Attached is the Plan Set (see sheet 9, in particular) and below is an aerial with the overall site location in proximity to SE 35th St. which is likely where centralized water and sewer facilities are located. The proposed modular office building location is approximately 950 linear feet, along the dirt drive, to SE 35th St.

1. We understand that the Drain field must be a min of 100' from the Well. Is the septic tank required to be 100' from the Well, as well? Yes; any part of the OSTDS
2. The comments noted a 75' distance from the Pond to the septic tank and drain field, is that required? Only if wet basin; dry basin is a 15 ft. setback. I have no knowledge of the soil drainage in this plan or design and if the estimated seaonal high water table is shallower than the bottom of the basin it may be viewed as an artificial permanent non tidal surface water body triggering the 75 ft. setback.

3. The comments noted a Design High Water elevation of 105.5 and that the pond is a wet basin. The high water elevation in the pond is 107.5 and the pond is designed as a dry basin. Noted
4. Is the well required to be 100' from the proposed dry pond? Get a determination from the appropriate water management district on that. It is likely that the basin is a sanitary hazard per 62-532 FAC and would require the setback.
5. The proposed drain field is currently designed to be mounded about 1' on the low end. This can be raised as necessary.

Note: the Health Department cannot waive any available sewer connection for new construction. If sewer is available (which appears unlikely) then legislative intent is for connection. Get a sewer availability determination letter from the public utility GRU.

Let me know.

Excerpt from comments from Alachua DR

1. Please note that via email on 1/16/2024, Todd Harris Environmental Manager with the Florida Department of Heal
concerns. Please coordinate with the Health Department ASAP to confirm any revisions to the location of the septi
- Septic tank shown less than 100 ft. to what will be a Limited Use Commercial Well.
- Septic tank septic system not shown 75 ft. from the design high water 105.5' elevation for the proposed stormw
a pre 1972 plat date grandfather reduction is not in play and that it is a wet basin. I do not know if EPD would req
basin.
- The well is located less than 100 ft. from the proposed basin/pond.
- If this becomes a mounded Drainfield due to site soil conditions there could be filling and that may need to be co
relation to the noted wetland line.

   If changes are necessary, they must be made within the "developable area" outlined in the civil plans.

GPI
Colby Brown, P.E.
d 850.297.2929 | c 850.450.2921
Greenman-Pedersen, Inc., *An Equal Opportunity Employer*

From: Jacob Stout <jstout@alachuacounty.us>
Sent: Wednesday, January 17, 2024 3:38 PM
To: Colby Brown <colbybrown@gpinet.com>
Cc: developmentreview <developmentreview@alachuacounty.us>
Subject: RE: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Good afternoon Colby,

Attached is the template for the deed restriction, two will be necessary. One for water and one for sewer.

Todd Harris, todd.harris@flhealth.gov, is the contact that can provide the letter (an email from him is sufficient) to satisfy the exception to centralized water and sewer from Alachua County Health Department.

Barbara Misener, misenerbj@gru.com, is the contact that can provide the same exception to centralized water and sewer from GRU.

Please let me know if you would like a meeting with GM/EPD staff to discuss the comments. I also copied the reviewers in the automated email.

I will be out of the office tomorrow from around 1:00 p.m. – 3:00 p.m. ET for a hearing, otherwise I will do my best to help you with any questions.

Jacob Stout
Planner
Growth Management
10 SW 2nd Avenue • Gainesville • Florida • 32601
352-374-5249 ext. 2320 (office) • 352-338-3224 (fax)

From: alachuacounty-no-reply@citizenserve.com <alachuacounty-no-reply@citizenserve.com>
Sent: Wednesday, January 17, 2024 4:31 PM
To: colbybrown@gpinet.com
Cc: developmentreview <developmentreview@alachuacounty.us>; Chris Dawson <cdawson@alachuacounty.us>; Emily Rodriguez <erodriguez@alachuacounty.us>; Ken McMurry <kmcmurry@alachuacounty.us>; David Tooke <dtooke@alachuacounty.us>; Shane Williams <eswilliams@alachuacounty.us>; Silver Ware <sware@alachuacounty.us>
Subject: DR Minor Insufficiencies Notice - Paynes Prairie Preserve Modular Office Site Modifications

Alachua County
Development Review Staff
Project Acceptance
Project Number: DR23-000065
Date: 01/17/2024

Minor Insufficiencies Paynes Prairie Preserve Modular Office Site Modifications

Staff has the following minor comments for Paynes Prairie Preserve Modular Office Site Modifications. To be eligible for a hearing we will need the following items addressed. Once these have items have been addressed, we can consider this application complete, and ready for a hearing. Please respond by **1:00 p.m., Thursday 1/18/2024**, that you will be able to make these changes and provide revised plans by **12:00 p.m., Thursday 1/25/2024**.

Development Services - Development Plan Review: Jacob Stout

1. Please note that via email on 1/16/2024, Todd Harris Environmental Manager with the Florida Department of Health raised the following concerns. Please coordinate with the Health Department ASAP to confirm any revisions to the location of the septic system and drainfield:
   - Septic tank shown less than 100 ft. to what will be a Limited Use Commercial Well.

- Septic tank septic system not shown 75 ft. from the design high water 105.5’ elevation for the proposed stormwater pond. This assumes a pre 1972 plat date grandfather reduction is not in play and that it is a wet basin. I do not know if EPD would require 75 ft. or not to wet basin.
- The well is located less than 100 ft. from the proposed basin/pond.
- If this becomes a mounded Drainfield due to site soil conditions there could be filling and that may need to be considered by EPD in relation to the noted wetland line.

If changes are necessary, they must be made within the "developable area" outlined in the civil plans.

2. Additional documentation is needed to satisfy Section 407.109. Please provide a letter from GRU and Alachua County Health Department that address the infeasibility of connecting to centralized potable water and sanitary sewer system [407.109(b) and 407.109(c)]. Staff will provide contact information. Provide a note on the Utility Plan (Sheet 9) that states "connection to centralized potable water and sanitary sewer will be provided once it becomes feasible and shall utilize low-flow or ultra-low flow plumbing fixtures and shall use the St. John's River Water Management District's Water Star standards as the minimum standard for water use" [407.109(d)(1, 3, & 4)].

3. Please include 2 bicycle parking spaces (ex. 1 "u" rack) to satisfy Section 407.15(b)(1): A minimum of one (1) bicycle parking space shall be provided for every ten (10) required vehicular spaces or two (2) spaces for each public and employee entrance, whichever is greater. Please also note location requirements in Section 407.15(c) when siting the bicycle spaces.

4. On Sheet 7, please remove "architectural" from the note to refer to the architectural building plans. Architectural elevations are often a required component that are reviewed by the DRC for non-residential projects. Elevations are not required for this project and staff wants to avoid potential confusion with the referenced notes. A note to refer to building plans is sufficient.

5. Please note the following *Condition of Approval*: "The applicant shall complete and record a deed restriction prior to the issuance of Construction Permit affirming that the property will abandon any on-site private wells and septic systems and connect to a centralized system when feasible per ULDC Section 407.109(d)(2)." Staff will provide templates

Development Services - County Forester and Landscape Inspector: Ken McMurry

6. A temporary automatic irrigation system is required for all new required landscaping, per 407.46(a). Temporary irrigation systems must be removed once the plants are established or within one year, whichever occurs first. All irrigation systems are required to have a functioning rainfall shutoff device set to active even during establishment, per 407.46(a)4. All newly planted trees shall have individual low flow or micro-irrigation supplies, per 407.46(a)3. Prior to the installation of a new permanent irrigation system or addition to an existing system, an irrigation plan must be submitted to and approved by the Alachua County Environmental Protection Department through Citizenserve. The irrigation system shall comply with the Landscape Irrigation Design and Maintenance Standards found in Article VI of Part II, Title 7, Chapter 77 of the Alachua County Code, which among additional design standards, limit irrigation to 50% of the permeable area. For more information, visit the Irrigation Design Standards website or contact the Alachua County Environmental Protection Department at 352-264-6800. A temporary irrigation system instead of a permanent system is strongly encouraged. Here is a link to a temporary irrigation guidance document – https://alachuacounty.us/Depts/epd/WaterResources/WaterConservation/Documents/ADACompliant/Temporary%20Irrigation%20Guidance%20Document_V%208-25-23_ADA.pdf. An added incentive is the avoidance of commercial irrigation systems registration and annual inspection/maintenance requirement.

7. Include calculations demonstrating canopy trees spaced no more than an average of every 35 linear feet around the basin perimeter, and at least 25 percent of the area of the basin, including the shoulders and maintenance area, using native landscape plantings, excluding sod, 407.92(b)(1).

Growth Management - Transportation Planning: Chris Dawson

8. The subject application proposes to remove an existing 660 sq. ft. residence and add a modular office structure. The new structure will be subject to the County's impact fees and mobility fee. Fire Impact fee credit for the existing home is $56.43. The modular office building is shown as 1,750 sq. ft. Fire Impact Fees for the new building would be $149.63. After applying the credit, the net Fire Impact Fee will be $93.20. Mobility Fee credit for the existing home is at the rate of $1,761 per ksf, or $1,162.26. The office building Mobility Fee rate is $2,936 per ksf, or $5,138. After applying the credit, the net Mobility Fee will be $3,975.74. These fees are due prior to CO, and will be assessed on the building permit for the modular structure.

Environmental Protection Department - Development Plan Review: Emily Rodriguez

9. The applicant has submitted a memo from the Department of Historic Resources recommending professional archeological monitoring during ground-disturbing activities and shall comply with that recommendation.

10. The applicant shall obtain all required state and federal permits prior to commencement of the development. Upon issuance of a required state or federal permit, the applicant shall furnish a copy of such permit to the applicable County department.

11. The proposed office and all other construction activities will be located outside of required wetland buffers.
12. Hold the Certificate of Occupancy for the office building pending receipt of the required Well Registration Form and copy of the Well Completion Report by the Alachua County Environmental Protection Department.

13. In order to protect the wetland buffer during construction, add the following note to the plans, "No filling, excavation, alteration, or construction activity shall be permitted in the wetland buffer; except for such specific exempt activities authorized by the Alachua County Environmental Protection Department."

14. Revise the plans to show a protective barrier, such as high visibility netting, around the existing shed with water well.

15. Revise the plans to show a tree barricade along the north side of the dirt drive in order to protect the minimum wetland buffer during construction.

16. For any proposed site plan modifications, please note: Surface waters and/or wetlands exist on the property. All development activities are prohibited in these areas and their associated buffers without prioer aurhtorization by the Alachua County Environmental Protection department [Article VI, Chapter 406, ULDC].

Environmental Protection Department - Chapter 77 Stormwater Treatment Code: Shane Williams

16. Section 77.27(b) of the stormwater treatment code requires that nitrogen and phosphorus be reduced by 95% when directly discharged into OFWs. However, because the wetlands that discharge is occurring to are considered an OFW simply because they are in a State Park, the

70/80% criteria in 77.27(a) will be sufficient. This would be considered an alternative compliance and should be noted on the affidavit of compliance in Part 3.

Public Works - Development Plan Review: David Tooke

17. Provide access location to public street SE 35th Street.