



THE SUNRISE CITY

**FORT PIERCE**  
PLANNING DEPARTMENT  
*Florida*

---

**TO:** Technical Review Committee

**THROUGH:** Kevin Freeman, Planning Director

**FROM:** Ryan Altizer, Planner

**RE:** **Office/Shop - Site Plan- 23-07000009**  
**2006 Hartman Road**

**BOARD DATE:** April 20, 2023

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**Site Plan at 2006 Hartman Rd.**

The above referenced project is being submitted for your review and comments. The applicant is requesting a Development and Design Review for 2006 Hartman Road.

Please send all comments to [raltizer@cityoffortpierce.com](mailto:raltizer@cityoffortpierce.com), [kcharles@cityoffortpierce.com](mailto:kcharles@cityoffortpierce.com) and/or through interoffice mail to the Planning Department

If you have comments, please respond prior to Tuesday, April 18, 2023. If you have any questions, please contact the Planning Department at 772-467-3737 or Ryan Altizer at 772-467-3742.

Thank you.



**DEVELOPMENT REVIEW**

**Property Information**

Property address or Location 2006 Hartman Rd  
 Parcel ID #(s) 2417-332-0005-000-1  
 Project description Proposed office / shop

**Application Type**

- Site Plan       Conditional Use w/New Construction       Conceptual Development Plan  
 Minor Amendment       Major Amendment

**Site Information**

3,000 office  
 Non-Residential: Proposed Sq. Ft. 10,000 shop Site Acreage: 2.28  
 Residential: Proposed Units: \_\_\_\_\_ Proposed Sq. Ft.: \_\_\_\_\_ Site Acreage: \_\_\_\_\_

Devin Wheaton

Property Owner(s)

1720 Copenhagen Rd

Street Address

Fort Pierce FL 34945

City State Zip

(772) 201-5426

Phone Number

treasurecoastgc@gmail.com

Email Address

Devin Wheaton

Applicant/Representative, Title, Company

1720 Copenhagen Rd

Street Address

Fort Pierce FL 34945

City State Zip

(772) 201-5426

Phone Number

treasurecoastgc@gmail.com

Email Address

*Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

*[Handwritten Signature]*

Property Owner(s) Signature(s)

**APPOINTMENTS ARE REQUIRED FOR APPLICATION SUBMITTALS**

CALL 772.467.3737 OR E-MAIL [PLANNING\\_DL@CITYOFFORTPIERCE.COM](mailto:PLANNING_DL@CITYOFFORTPIERCE.COM)

For more information, please refer to the website:

<https://www.cityoffortpierce.com/971/Application-Submittal-for-Technical-Rev>



**DESIGN REVIEW**

**Property Information**

Property address or Location 2006 Hartman Rd  
 Parcel ID #(s) 2417-332-0005-000-1  
 Project description New Office Building and Warehouse / Storage Building

Wheaton Holdings LLC  
 Property Owner(s)

1720 Copenhagen Rd  
 Street Address

Fort Pierce FL 34945  
 City State Zip

(772) 201-5426  
 Phone Number

treasurecoastgc@gmail.com  
 Email Address

Michael Menard Architectonic Inc.

Applicant/Representative, Title, Company

806 Delaware Avenue  
 Street Address

Street Address

Ft. Pierce FL 34950  
 City State Zip

772 460 7751  
 Phone Number

Phone Number

mmenard@architectonicinc.com  
 Email Address

Email Address

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<https://www.cityoffortpierce.com/971/Application-Submittal-for-Technical-Rev>

## **Design Review Application Checklist** **(City Code of Ordinances 125-314)**

### **Submittal for Administrative Approval**

- a. A survey (1" = 30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of section 123-66, location of bordering streets and, if applicable, wetlands and beaches.
- b. A site analysis study to include a discussion of specimen trees and other natural vegetation, access, significant topography, wetlands, buffers, setbacks, views, orientation, the surrounding built environment, and other site features that may influence design elements.
- c. A draft written narrative describing the design intent of the project, its goals, and objectives and how it reflects the site analysis study results.
- d. Context photographs of neighboring uses and architectural styles.
- e. Photographs and/or drawings of architectural buildings or objects that serve as a precedent for the proposed building design. Models should be taken from local exemplary buildings, either existing or demolished. Documentation of such buildings is available in the city's planning department.
- f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.
- g. Conceptual site plan (to scale) showing proposed location of all buildings, structures, parking areas, signs and landscaping.
- h. Landscape plan, at the same scale as the site plan. The planning director or designee may request enlarged plans of detailed planting areas. Planting schedule with sizes of proposed plantings must be included.
- i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.
- j. Exterior elevations showing architectural character, external architectural features, and streetscape of the proposed development, including materials, colors, shadow lines and landscaping. The street elevation shall encompass the entire proposed project and generally identify the major elements of the adjacent two (2) properties on either side of the site. If the adjacent properties are vacant or underutilized, a diagram shall be provided that identifies the mass and form that is allowable under current zoning. If the street elevation must be drawn at such a scale as to render architectural details of the building unreadable, drawings of individual buildings at a larger scale should be provided as well.
- k. Design review concurrent with conceptual development plan procedure according to subsection 125-313 is also available.

### **Submittal for Board Approval**

- a. A written narrative describing how the project conforms to administrative approval and design review guidelines of this section.
- b. A final site plan meeting the requirements of section 125-313.
- c. A final site lighting plan that meets the requirements of subsection 125-313(d)(8).
- d. A final landscape plan that meets the requirements of articles II and III of chapter 123.
- e. Final floor plans and elevation drawings (1/8" = 1'-0" minimum scale), as detailed under administrative approval, showing exterior building materials and colors with architectural sections and details to adequately describe the project.
- f. A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation.









**LEGAL DESCRIPTION:**  
 A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST AND DESCRIBED IN DEEDS RECORDED IN OFFICIAL RECORDS BOOK 1424, PAGE 1356; OFFICIAL RECORDS BOOK 1428, PAGE 1778; OFFICIAL RECORDS BOOK 1481, PAGE 728; OFFICIAL RECORDS BOOK 1777, PAGE 17; OFFICIAL RECORDS BOOK 2887, PAGE 317; OFFICIAL RECORDS BOOK 3548, PAGE 2971; RE-RECORDED IN OFFICIAL RECORDS BOOK 3567, PAGE 2663; OFFICIAL RECORDS BOOK 3970, PAGE 593; AND FINAL JUDGEMENT QUIETING TITLE RECORDED IN OFFICIAL RECORDS BOOK 2853, PAGE 155; LESS AND EXCEPT ANY PORTION DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 67, PAGE 628.

**ALSO KNOWN AS:**  
 A PARCEL OF LAND BEING A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE WEST 1/4 CORNER OF SAID SECTION 17; THENCE SOUTH 01°20'45" WEST, ALONG THE WEST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, A DISTANCE OF 1817.14 FEET TO A POINT ON THE WESTERLY EXTENSION OF THE NORTH LINE OF THE PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 76, PAGE 31, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE NORTH 89°46'21" EAST, A DISTANCE OF 45.01 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HARTMAN ROAD, SAID POINT ALSO BEING THE NORTHWEST CORNER OF SAID PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN; THENCE CONTINUE NORTH 89°46'21" EAST, ALONG THE NORTH LINE OF SAID PLAT AND EASTERLY EXTENSION THEREOF, A DISTANCE OF 394.68 FEET; THENCE NORTH 04°04'55" WEST, A DISTANCE OF 255.64 FEET TO A POINT THAT IS 245 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17; THENCE SOUTH 89°46'21" WEST, ALONG SAID LINE, A DISTANCE OF 200.50 FEET; THENCE SOUTH 01°20'40" WEST, A DISTANCE OF 14.91 FEET; THENCE SOUTH 89°46'21" WEST, A DISTANCE OF 169.98 FEET TO A POINT ON SAID EAST RIGHT OF WAY LINE OF HARTMAN ROAD; THENCE SOUTH 01°20'45" WEST, ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 240.25 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS, WITHIN SAID BOUNDS, 95,047 SQUARE FEET OR 2.18± ACRES MORE OR LESS.

**ADDRESS:** 2006 HARTMAN ROAD  
 FORT PIERCE, FLORIDA 34947

- NOTES:**
- SUBJECT TO ANY APPLICABLE EASEMENTS, RIGHTS-OF-WAY, OR OTHER RESTRICTIONS OF RECORD.
  - A SEARCH OF THE PUBLIC RECORDS HAS NOT BEEN MADE BY THIS OFFICE.
  - BEARINGS SHOWN HEREON ARE RELATED TO THE WEST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, HAVING A MEASURED BEARING OF S 01°20'45" W. ALL OTHER BEARINGS ARE RELATIVE THERETO.
  - SCRIPTS ERROR FOUND IN LEGAL DESCRIPTION RECORDED IN OFFICIAL RECORDS BOOK 4737, PAGE 43, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA. DEED CALL OF S 01°20'40" E IS INCORRECT. CALL OF S 01°20'40" W CLOSES LEGAL DESCRIPTION REVISED BY SURVEYOR.
  - ELEVATIONS ARE IN FEET AND RELATED TO THE ST. LUCIE COUNTY BENCHMARK "VIR 3-22 HARRY", HAVING A PUBLISHED ELEVATION OF 15.84 FEET NAVD (NORTH AMERICAN VERTICAL DATUM). ALL OTHER ELEVATIONS ARE RELATIVE THERETO.
  - PROPERTY LIES IN F.I.R.M. ZONE "X", AS PER MAP NUMBER 12111C0186J, DATED 2/16/12. FLOOD ZONES ARE APPROXIMATE AS SCALED FROM FLOOD INSURANCE RATE MAPS.
  - ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY, IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
  - UTILITIES SHOWN HEREON ARE VISIBLE ABOVE GROUND FEATURES. ADDITIONAL SUBSURFACE UTILITIES AND/OR FEATURES MAY EXIST.
  - THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT SHOWN ON THIS SURVEY, THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.
  - NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
  - PUBLIC WATER AND SEWER AVAILABLE.
  - THE EXPECTED USE OF THE SURVEY AND MAP IS COMMERCIAL.
  - ELEVATIONS WERE ESTABLISHED BY GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) REAL TIME KINEMATICS (RTK) USING FLORIDA DEPARTMENT OF TRANSPORTATION - FLORIDA PERMANENT REFERENCE NETWORK (FDOT - FPRN) WITH REDUNDANCY OF MEASUREMENTS PERFORMED. ALL VERTICAL ACCURACY IS 0.10 FOOT PLUS OR MINUS.
  - ELEVATIONS WERE ESTABLISHED BY GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) REAL TIME KINEMATICS (RTK) USING FLORIDA DEPARTMENT OF TRANSPORTATION - FLORIDA PERMANENT REFERENCE NETWORK (FDOT - FPRN) WITH REDUNDANCY OF MEASUREMENTS PERFORMED. ALL VERTICAL ACCURACY IS 0.10 FOOT PLUS OR MINUS.
  - ALL DISTANCES AND ELEVATIONS SHOWN ARE IN ACCORD WITH THE UNITED STATES STANDARD USING FEET.
  - ALL DIRECTIONAL MEASUREMENTS SHOWN ARE IN THE FORMAT OF DEGREES, MINUTES AND SECONDS.
  - BOUNDARY AND TOPOGRAPHIC SURVEY FIELD DATE: 7-27-22.  
 LAST DATE OF FIELD ACQUISITION (TREE SURVEY): 02-14-23.

**CERTIFIED TO:**

I HEREBY CERTIFY THAT THE ATTACHED BOUNDARY AND TOPOGRAPHIC SURVEY OF THE HEREON DESCRIBED PROPERTY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION ON FEBRUARY 14, 2023. I FURTHER CERTIFY THAT THIS BOUNDARY AND TOPOGRAPHIC SURVEY MEETS THE STANDARD OF PRACTICE AS SET FORTH IN CHAPTER 5J-17 ADOPTED BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS, PURSUANT TO FLORIDA STATUTES 472.027.

ROBERT F. KEMERSON  
 PROFESSIONAL SURVEYOR AND MAPPER  
 STATE OF FLORIDA (PSM)#6285

**ABBREVIATIONS LEGEND**

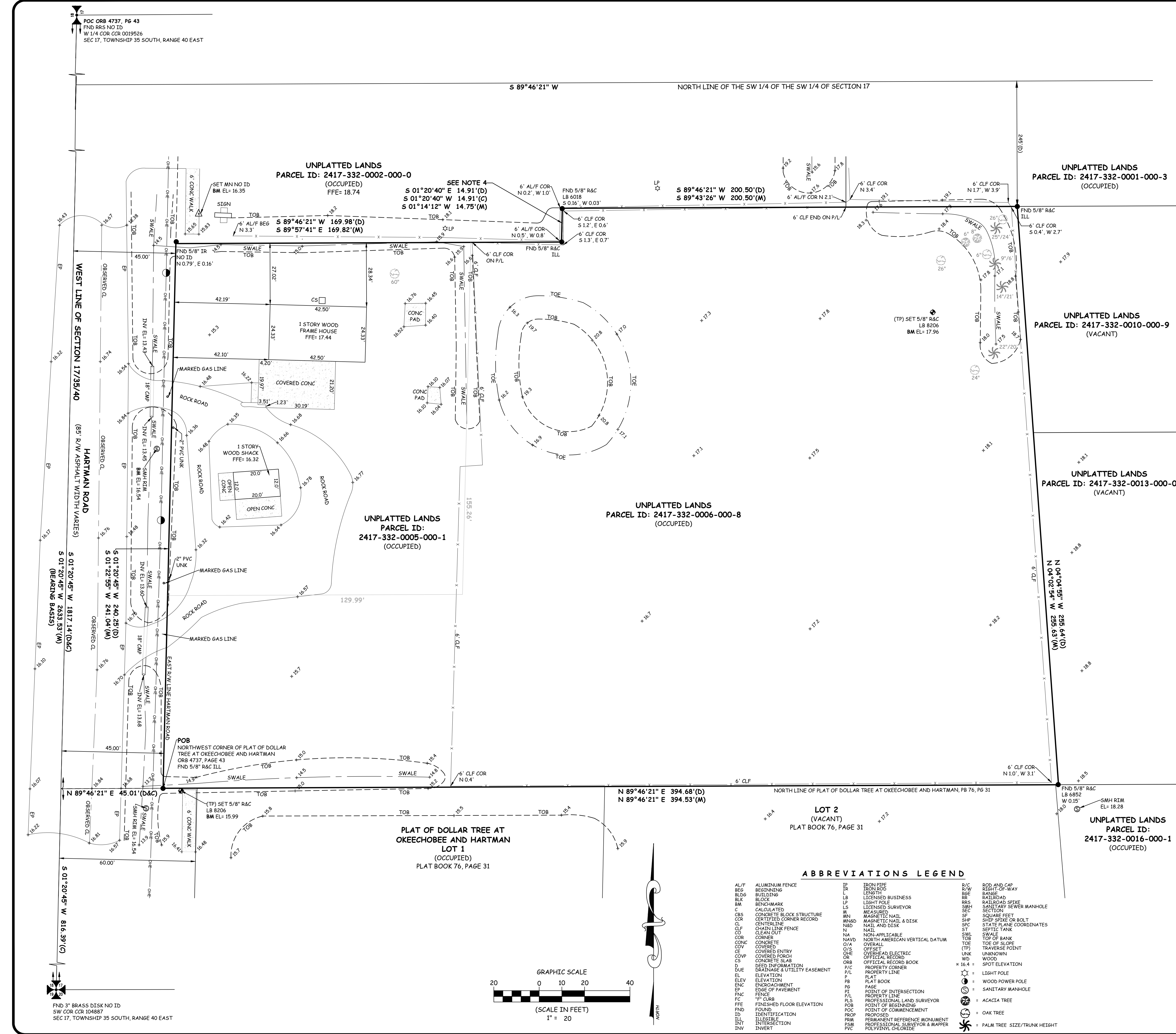
AL/F ALUMINUM FENCE	IR IRON PIPE	R/C RODS AND CURB
BEG BEGINNING	LR LICENSED BUSINESS	R/W RIGHT-OF-WAY
BLDG BUILDING	LP LIGHT POLE	R/R RANGE
BLK BLOCK	LS LICENSED SURVEYOR	R/S RAILROAD
BM BENCHMARK	M MAGNETIC NAIL	R/SB RAILROAD SPIKE
C CALCULATED	MND MAGNETIC NAIL & DISK	R/SW SANITARY SEWER MANHOLE
CBS CONCRETE BLOCK STRUCTURE	NAIL AND DISK	SEC SECTION
CCR CERTIFIED CORNER RECORD	NA NON-APPLICABLE	SF SQUARE FEET
CL CENTERLINE	NAVOD NORTH AMERICAN VERTICAL DATUM	SHP SHIP SPIKE OR BOLT
CLF CHAIN LINK FENCE	O/A OVERALL	SPC STATE PLANE COORDINATES
CONC CONCRETE	O/S OFFSET	ST SEPTIC TANK
COR CORNER	ORB OFFICIAL RECORD BOOK	TOE TOP OF BANK
COV COVERED	P/V PROPERTY LINE	TOE TOE OF SLOPE
COVE COVERED ENTRY	PB PLAT BOOK	TRV TRAVERSE POINT
COVP COVERED PORCH	PG PAGE	UNK UNKNOWN
CS CONCRETE SLAB	PI POINT OF INTERSECTION	WD WOOD
DEE DEED INFORMATION	P/L PROPERTY LINE	WO WOOD
DES DRAINAGE & UTILITY EASEMENT	PL PLAT	W 16.4 SPOT ELEVATION
ELEV ELEVATION	PLB PLAT BOOK	☼ LIGHT POLE
ENC ENCROACHMENT	PI POINT OF INTERSECTION	⊕ WOOD POWER POLE
EP EDGE OF PAVEMENT	P/L PROPERTY LINE	⊙ SANITARY MANHOLE
FNC FENCE	PLS PROFESSIONAL LAND SURVEYOR	☪ ACACIA TREE
FC CURB	POB POINT OF BEGINNING	☪ OAK TREE
FFE FINISHED FLOOR ELEVATION	POC POINT OF COMMENCEMENT	☪ PALM TREE SIZE/TRUNK HEIGHT
FND FOUND	PROPOSED	
ID IDENTIFICATION	PRM PERMANENT REFERENCE MONUMENT	
ILL ILLISIBLE	PSM PROFESSIONAL SURVEYOR & MAPPER	
INT INTERSECTION	PVC POLYVINYL CHLORIDE	
INV INVERT		

**VELCON ENGINEERING & SURVEYING, LLC**  
 CERTIFICATE OF AUTHORIZATION NO. LB 8206  
 1449 NW COMMERCE CENTRE DRIVE  
 FORT ST. LUCIE, FLORIDA 34986  
 PHONE (772) 879-0477  
 Web Site: www.velconllc.com

**BOUNDARY AND TOPOGRAPHIC SURVEY  
 LYING IN ST. LUCIE COUNTY  
 SECTION 17, TOWNSHIP 35S, RANGE 40E**

BY	DATE	REVISIONS
6/15	02-15-23	ADD TREES

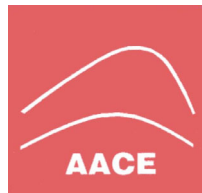
**DRAWN BY:** HN  
**APPROVED BY:** R. KEMERSON  
**SCALE:** 1" = 20'  
**DATE:** 07/29/22  
**FIELD BOOK/PAGES:** SURVEY MAP  
**JOB NUMBER:** 22-2202  
**SHEET:** 1 OF 1





**SUBSURFACE SOIL EXPLORATION AND  
GEOTECHNICAL ENGINEERING EVALUATION  
2006 HARTMAN ROAD  
TREASURE COAST GENERAL CONTRACTORS  
FORT PIERCE, ST. LUCIE COUNTY, FLORIDA**

AACE FILE NO. 22-309



**ANDERSEN ANDRE CONSULTING ENGINEERS, INC.**

834 SW Swan Avenue  
Port St. Lucie, Florida 34983  
Ph: 772-807-9191 Fx: 772-807-9192  
[www.aaceinc.com](http://www.aaceinc.com)

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Treasure Coast General Contractors, LLC  
1700 Copenhaver Road  
Fort Pierce, FL 34945

Attention: Mr. Devin Wheaton

**SUBSURFACE SOIL EXPLORATION AND  
GEOTECHNICAL ENGINEERING EVALUATION  
2006 HARTMAN ROAD | TREASURE COAST GENERAL CONTRACTORS  
FORT PIERCE, ST. LUCIE COUNTY, FLORIDA**

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**1.0 INTRODUCTION**

In accordance with your request and authorization, Andersen Andre Consulting Engineers, Inc. (AAACE) has completed a subsurface exploration and geotechnical engineering analyses for the above referenced project. The purpose of performing this exploration was to explore shallow soil types and groundwater levels as they relate to the proposed construction, and restrictions which these soil and groundwater conditions may place on the proposed site development. Our work included Standard Penetration Test (SPT) borings, hand auger borings, soil hydraulic conductivity and infiltration testing, laboratory testing, and engineering analysis. This report documents our explorations and tests, presents our findings, and summarizes our conclusions and recommendations.

**2.0 EXECUTIVE SUMMARY**

The following summary is intended to provide a brief overview of our findings and recommendations; however, the report should be read in its entirety by the project design team members.

- The proposed building sites, at the locations explored, were found to be underlain by soils which are generally satisfactory to support the proposed construction on conventional spread foundations. A maximum design foundation bearing pressure of 2,500 pounds per square foot (psf) is recommended for the proposed structures.
- Typical pavement sections consisting of an asphaltic or rigid concrete wearing surface atop a calcareous base, followed by a stabilized subgrade on compacted natural soils is considered appropriate for the project, provided adequate separation between the pavement section and the seasonal high water table elevation can be maintained.
- Site preparation procedures will include clearing, stripping and grubbing of all surface vegetation and organic topsoil, followed by proofrolling of building and pavement areas.
- The groundwater table was encountered at depths of 1.5-3.0 feet below the existing grades.

### **3.0 SITE INFORMATION AND PROJECT UNDERSTANDING**

#### ***3.1 Site Location and Description***

The ±2.5 acre subject site is located at 2006 Hartman Road in Fort Pierce, St. Lucie County, Florida (within Section 17, Township 35 South, Range 40 East, Parcel IDs 2417-332-0006-000-8 & 2417-332-0005-000-1). The location of the subject site is graphically depicted on the Site Vicinity Map (2021 aerial photograph) as well as on a reproduction of the USGS Topographic Quadrangle Map of “Fort Pierce, Florida”, both presented on our Figure No. 1. The USGS Quadrangle Map depicts the subject property as being relatively level with an average surface elevation of about 15 feet relative to the National Geodetic Vertical Datum of 1929. Two small structures are visible on the USGS map within the northwest portion of the property, resembling closely the locations of the two minor structures currently present within this portion of the site. Additional site conditions include internal fencing and a small, low/overgrown mound (refer to Figure No. 2 for approximate location).

#### ***3.2 Review of USDA Soil Survey***

According to the USDA NRCS Web Soil Survey, the predominant surficial soil types in the area where the site is located are the following:

- Ankona and Farmton sands (USDA Map Unit 2)  
[within the ± 2/3 eastern portion of site]
- Pineda sand, 0 to 2 percent slopes (USDA Map Unit 32)  
[within the ± 1/3 western portion of site]

These soil types are both described by the USDA NRCS to consist of poorly drained, sandy and loamy marine deposits originating from within flatwoods, flats and drainageways on historic marine terraces, with sands, loamy sands and sandy loam present to depths in excess of 80 inches below grade.

The approximate location of the subject site was superimposed on an aerial photograph obtained from the USDA Web Soil Survey and is shown on Figure No. 1. Further, the USDA Web Soil Survey summary report is included in Appendix I.

#### ***3.3 Project Understanding***

Based on our conversations and our review of the provided site plan (prepared by LaConte Engineering and dated 08/12/22), we understand that the project will consist of constructing a single-story CMU office building (3,000SF) and a single-story CMU shop/warehouse (10,000SF). For construction of this type we expect maximum wall loads of 1-2 kips per lineal foot and maximum column loads of 150 kips (if any). We expect that a maximum of 2-3 feet of fill will be needed to raise the building grades.

Additional site improvements will include flexible and rigid pavement systems along with stormwater retention areas.

Details of the provided Site Plan are presented as our Field Work Location Plan, Figure No. 2.

#### **4.0 FIELD EXPLORATION PROGRAM**

To explore subsurface conditions at the site, the exploration program summarized in Table 1 below was completed:

**Table 1 - Field Exploration Program**

<b>Field Work Type</b>	<b>Standard</b>	<b># of Borings /Tests</b>	<b>Depth Below Grade [feet]</b>	<b>Location</b>
Standard Penetration Test (SPT)	ASTM D1586	6	20	Refer to Figure No. 2
Auger	ASTM D1452	5	4-5	Refer to Figure No. 2
Soil Hydraulic Conductivity Test	SFWMD ERPIM <sup>(1)</sup>	1	6	Refer to Figure No. 2
Double-Ring Infiltrometer Test	ASTM D3385	1	NA	Refer to Figure No. 2

Note to Table 1: (1) SFWMD Environmental Resource Permit Information Manual, Volume IV

Our site visits and field exploration program were completed in the period October 18 - November 1, 2022. The field work locations shown on Figure No. 2 were determined in the field by our field crew using the provided site plan, aerial photographs, existing site features, and a hand-held GPS instrument. The locations should be considered accurate only to the degree implied by the method of measurement used. We preliminarily anticipate that the actual locations are within 15 feet of those shown on Figure No. 2.

Summaries of AACE's field procedures are presented in Appendix II and the individual boring profiles are presented on the attached on Sheet No. 1. Samples obtained during performance of the borings were visually classified in the field, and representative portions of the samples were transported to our laboratory in sealed sample jars for further classification. The soil samples recovered from our explorations will be kept in our laboratory for 60 days, then discarded unless you specifically request otherwise.

#### **5.0 OBSERVED SUBSURFACE CONDITIONS**

##### ***5.1 General Soil Conditions***

Detailed subsurface conditions are illustrated on the soil boring profiles presented on the attached Sheet No. 1. The stratification of the boring profiles represents our interpretation of the field boring logs and the results of laboratory examinations of the recovered samples. The stratification lines represent the approximate boundary between soil types. The actual transitions may be more gradual than implied.

In general, at the locations and depths explored, the majority of our soil borings encountered a thin mantle of topsoil (sands with roots/organics) followed by loose to medium fine sands (SP) to depths of about 13-18 feet, in turn followed by very loose slightly clayey fine sands (SP-SC) and clayey fine sands (SC), and then by soft to medium stiff clay (CL) beginning at an approximate depth of 18 feet and reaching the termination depths of our borings.

The above soil profile is outlined in general terms only. Please refer to the attached Sheet No. 1 for individual soil profile details.

### **5.2 Measured Groundwater Level**

The groundwater table depth as encountered in the borings during the field investigations is shown adjacent to the soil profiles on the attached Sheet No. 1. As can be seen, the groundwater table was generally encountered at depths of about 1.5 to 3.0 feet below the existing ground surface. Fluctuations in groundwater levels should be anticipated throughout the year primarily due to seasonal variations in rainfall and other factors that may vary from the time the borings were conducted.

### **5.3 Estimated Normal Seasonal High Groundwater Table**

The groundwater table will fluctuate seasonally, primarily based on rainfall. The normal seasonal high groundwater level is likely during the rainy season in Southeast Florida, typically between June and September of each year. The water table elevations associated with a 100-year flood level (or during an extreme storm event) would be much higher than the normal seasonal high water table elevation. The normal seasonal high groundwater table can also be influenced by the presence of relief points such as canals, lakes, ponds, swamps, etc., as well as by the drainage characteristics of the in-situ soils.

Based upon our field exploration, our observation of recovered soil samples and on review of the soil survey, we estimate that the normal seasonal high groundwater level at the boring locations is about 1 foot above the levels encountered in the borings.

The estimated normal seasonal high groundwater levels do not provide any assurance that the groundwater levels will not exceed these estimated levels during any given year in the future. Drainage impediments, storm events or other such occurrences may result in groundwater levels exceeding our estimates.

If a more accurate determination of the seasonal groundwater level variations on this site is prudent for the design of the project, we would recommend installing a number of piezometers and performing periodic monitoring of the ambient groundwater levels.

### **5.4 Soil Hydraulic Conductivity Testing**

One (1) soil hydraulic conductivity test was performed at the approximate location shown on Figure No. 2. In general, the test was performed in substantial accordance with methods described in the South Florida Water Management District (SFWMD) Environmental Resource Permit Information Manual (ERPIM), Volume IV, and yielded the following results:

**Table 2 - Soil Hydraulic Conductivity Test Results**

Test No.	Groundwater Depth (ft-bls)	Flow Rate, Q (cfs)	Hydraulic Conductivity, K (cfs/sqf - ft head)
EX-1	2.5	$7.4 \times 10^{-4}$	$3.8 \times 10^{-5}$

The soil hydraulic conductivity test report is included in Appendix III.

### **5.5 Double-Ring Infiltrometer Testing**

One (1) double-ring infiltrometer (DRI) test was performed at the approximate location shown on Figure No. 2. This test was completed in general accordance with the procedures recommended in ASTM D3385, and yielded the following results:

**Table 3 - DRI Test Results**

<b>Test No.</b>	<b>Inner Ring Vertical Infiltration Rate, <math>V_{IR}</math> [in/hr]</b>	<b>Annular Space Vertical Infiltration Rate, <math>V_A</math> (in/hr)</b>
DRI-1	9.1	9.7

The DRI test report is included in Appendix III.

## **6.0 LABORATORY TESTING PROGRAM**

Our drillers observed the soil recovered from the SPT sampler and the augers, placed the recovered soil samples in moisture proof containers, and maintained a log for each boring. The recovered soil samples, along with the field boring logs, were transported to our Port St. Lucie soils laboratory where they were visually examined by AACE's project engineer to determine their engineering classification. The visual classification of the samples was performed in accordance with the Unified Soil Classification System, USCS. Further, representative samples were selected for index laboratory testing, consisting of moisture content tests (ASTM D2216) and percent fines tests (ASTM D1140). These tests were performed to aid in classifying the soils and to help evaluate the general engineering characteristics of the site soils.

The results of our classifications and laboratory analyses are presented on the soil boring profiles presented on Sheet No. 1.

## **7.0 GEOTECHNICAL ENGINEERING EVALUATION**

### **7.1 General**

Based on the findings of our site exploration, our evaluation of subsurface conditions, and judgment based on our experience with similar projects, we conclude that the soils underlying this site are generally satisfactory to support the proposed single-story construction on conventional spread foundations or monolithic (thickened-edge) slabs. However, in our opinion, the bearing capacity of the loose near-surface soils should be improved in order to reduce the risk of unsatisfactory foundation performance. The general soil improvement we recommend includes proofrolling the individual building sites site with a heavy vibratory roller.

Following are specific recommendations for site preparation procedures, foundation design, and pavement systems for the project.

### **7.2 Site Preparation Recommendations**

#### **7.2.1 Clearing**

The site surface should be cleared, grubbed and stripped of all vegetation, topsoil, trash and debris. Stumps should be removed entirely and their excavations backfilled with clean granular soils, compacted to the specifications noted below. Similarly, remnants from former building foundations, utilities (incl. septic tanks, drainfields, etc.) should be reclaimed and backfilled.

### 7.2.2 Compaction Procedures

Following clearing, the proposed building and pavement areas should be proofrolled with a 10 ton (minimum) vibratory roller; any soft, yielding soils detected should be excavated and replaced with clean, compacted backfill that conforms with the recommendations below. Sufficient passes should be made during the proofrolling operations to produce dry densities not less than 95 percent of the modified Proctor (ASTM D1557) maximum dry density of the compacted material to depths of 1 foot below the cleared, compacted surface, or 2 feet below the bottom of footings, whichever is lower. In any case, the building and pavement areas should receive not less than 10 overlapping passes, half of them in each of two perpendicular directions.

We recommend that the site preparation contractor closely monitor the vibrations produced during the proofrolling operations so that they do not adversely affect any nearby structures.

After the exposed surface has been proofrolled and tested to verify that the desired dry density has been obtained, the building and pavement areas may be filled to the desired grades. All fill material should conform to the recommendations below. It should be placed in uniform layers not exceeding 12 inches in loose thickness. Each layer should be compacted to a dry density not less than 95 percent of its modified Proctor (ASTM D1557) maximum value.

After completion of the general site preparations discussed above, the bottom of foundation excavations dug through the compacted natural ground, fill or backfill, should be compacted so as to densify soils loosened during or after the excavation process, or washed or sloughed into the excavation prior to the placement of forms. A vibratory, walk-behind plate compactor can be used for this final densification immediately prior to the placement of reinforcing steel, with previously described density requirements to be maintained below the foundation level.

Following removal of foundation forms, backfill around foundations should be placed in lifts six inches or less in thickness, with each lift individually compacted with a plate tamper. The backfill should be compacted to a dry density of at least 95 percent of the modified Proctor (ASTM D1557) maximum dry density.

### 7.2.3 Fill Material

All fill material under the buildings and pavement should consist of clean sands free of organics and other deleterious materials. The fill material should have not more than 12 percent by dry weight passing the U.S. No. 200 sieve, and no particle larger than 3 inches in diameter. Backfill behind walls, if any, should be particularly pervious, with not more than 4 percent by dry weight passing the U.S. #200 sieve.

## **7.3 Building Foundation and Slab Design**

After the foundation soils have been prepared as recommended above, the site should be suitable for supporting the proposed single-story construction on conventional shallow foundations or monolithic (thickened-edge) slabs proportioned for an allowable bearing stress of 2,500 pounds per square foot [psf], or less.

To provide an adequate factor of safety against a shearing failure in the subsoils, all continuous foundations should be at least 18 inches wide, and all individual column footings should have a minimum width of 36 inches. Exterior foundations should bear at least 18 inches below adjacent outside final grades.

Based upon the boring information and the assumed loading conditions, we estimate that the recommended allowable bearing stress will provide a minimum factor of safety in excess of two against bearing capacity failure. With the site prepared and the foundations designed and constructed as recommended, we anticipate total settlements of one inch or less, and differential settlement between adjacent similarly loaded footings of less than one-quarter of an inch. Because of the granular nature of the subsurface soils, the majority of the settlements should occur during construction; post-construction settlement should be minimal.

We recommend that representatives of AACE inspect all footing excavations in order to verify that footing bearing conditions are consistent with expectations. Foundation concrete should not be cast over a foundation surface containing topsoil or organic soils, trash of any kind, surface made muddy by rainfall runoff, or groundwater rise, or loose soil caused by excavation or other construction work. Reinforcing steel should also be clean at the time of concrete casting. If such conditions develop during construction, the reinforcing steel must be lifted out and the foundation surface reconditioned and approved by AACE.

After the ground surface is proofrolled and filled, if necessary, as recommended in this report, the floor slab can be placed directly on the prepared subgrade. For design purposes, we recommend using a subgrade reaction modulus of 150 pounds per cubic inch (pci) for the compacted shallow sands. In our opinion, a highly porous base material is not necessary. We recommend to use a minimum of 10 mil polyolefin film as the main component of a vapor barrier system.

## **8.0 PAVEMENT RECOMMENDATIONS**

### ***8.1 General***

Actual pavement section thickness should be provided by the project Civil Engineer based on traffic loads, volume, and the owners design life requirements. The following sections represent minimum thicknesses representative of typical load and construction practices and as such periodic maintenance should be anticipated. In addition, recommendations for a rigid pavement design are presented for use in delivery areas, dumpster pads, etc.

We recommend that the pavement sections be installed late in construction when most heavy construction traffic has ceased. If base material is placed during construction to provide a working surface it should be proofrolled, leveled, and thickened as required prior to paving at the end of construction.

### ***8.2 Flexible Pavement Sections***

We recommend a pavement section consisting of an asphaltic concrete wearing surface on a calcareous base course supported on stabilized subbase over well-compacted subgrade.

After clearing and proofrolling the site surface as previously recommended, the surficial soils should be suitable to support the pavement sections. The embankment material should be compacted to a dry density of 98 percent of the modified Proctor (ASTM D1557/AASHTO T-180) maximum dry density of the compacted soil to a depth of one foot below the surface.

#### **8.2.1 Stabilized Subgrade**

The subbase material to a depth of 12 inches should have a minimum Limerock Bearing Ratio (LBR) value (FDOT FM 5-515) of 40 and it should be compacted to at least 98 percent of its modified Proctor (ASTM D1557 or AASHTO T-180) maximum dry density.

### 8.2.2 Base Course

The base course may consist of crushed limerock or coquina and should have a minimum Limerock Bearing Ratio (LBR) value (FDOT FM 5-515) of 100. We recommend a base course at least 6 inches thick for standard pavements and a base course of 10 inches for heavy-duty pavements.

The 6-inch base course may be placed and compacted in a single layer, however, the 10-inch base course should be placed and compacted in two layers. All base course material should be compacted to at least 98 percent of its modified Proctor maximum dry density. We note that it is typically recommended that the bottom of a calcareous base course is separated from the Seasonal High Groundwater Table by at least 18 inches to avoid deterioration of the base course. If this cannot be achieved, the use of asphaltic “black” base (FDOT Type B-12.5) is recommended.

### 8.2.3 Asphalt Surface

We recommend an FDOT Type SP-9.5 or SP-12.5 asphaltic wearing surface. We recommend a wearing surface 1.5 inches thick on standard pavement and 2.5 inches thick on heavy-duty pavement. The 2.5-inch wearing surface should be placed and compacted in two layers. Care must be exercised to place the asphalt over dry, well primed base material.

### 8.2.4 Flexible Pavement Summary

The above recommendations should provide high quality pavement. If greater risk of more frequent pavement maintenance and repair is acceptable, then the above recommendations could be relaxed somewhat. Table 4 summarizes the recommended flexible pavement sections.

**Table 4 - Flexible Pavement Summary**

Traffic Group	Thickness [inches]			Structural Number
	Stabilized Subgrade	Base Course	Asphalt Surface	
Light Duty (interior roads): Auto parking area, light panel and pickup trucks; average gross vehicle weight of 4,000 lbs.	12	6	1.5	2.7
Heavy Duty: Bus drop-off areas, delivery trucks; average gross vehicle weight of 25,000 lbs	12	10	2.5	3.8

### **8.3 Rigid Pavement Sections**

After clearing and proofrolling the site surface as previously recommended, the surficial soils should be suitable to support the pavement sections. The subgrade material should be compacted to a dry density of 98 percent of the modified Proctor (ASTM D1557 or AASHTO T-180) maximum dry density of the compacted soil to a depth of two feet below the surface. The subgrade surface should be saturated immediately prior to concrete placement to provide adequate moisture for curing of the concrete.

We recommend a six-inch thick pavement section of Portland cement concrete. The concrete should have a minimum 28-day compressive strength of 4,000 psi. Construction control joints should be placed no more than 15 feet apart in either direction and should be at least one-quarter of the thickness of the concrete. They should be cut as soon as the concrete will support the crew and equipment (8 to 12 hours). The concrete should be cured by moist curing or by application of a liquid curing compound. The steel reinforcement within the concrete pavement should be designed by the project civil or structural engineer.

### **8.4 Curbing**

The curbing around landscaped areas adjacent to pavement should be constructed with full-depth curb sections. Use of extruded curb sections that lie directly above the final asphalt surface, or omission of the curbing, can allow migration of irrigation water from the landscaped areas. The excess water often causes separation of the asphalt wearing surface from the base and softening of the base material, resulting in early deterioration of the pavement.

### **9.0 QUALITY CONTROL PROGRAM**

We recommend establishing a robust quality control program to verify that all site preparation and foundation and pavement construction is conducted in accordance with the appropriate plans and specifications. Materials testing and inspection services should be provided by Andersen Andre Consulting Engineers, Inc.

### **10.0 CLOSURE**

The geotechnical evaluation submitted herein is based on the data obtained from the soil boring and test profiles presented on Sheet No. 1, and our understanding of the project as previously described. Limitations and conditions to this report are presented in Appendix IV.

This report has been prepared in accordance with generally accepted soil and foundation engineering practices for the exclusive use of Treasure Coast General Contractors, LLC. No other warranty, expressed or implied, is made.

We are pleased to be of assistance to you on this phase of your project. When we may be of further service to you or should you have any questions, please contact us.

Sincerely,  
**ANDERSEN ANDRE CONSULTING ENGINEERS, INC.**



Peter G. Andersen, P.E.  
Principal Engineer  
Fla. Reg. No. 57956



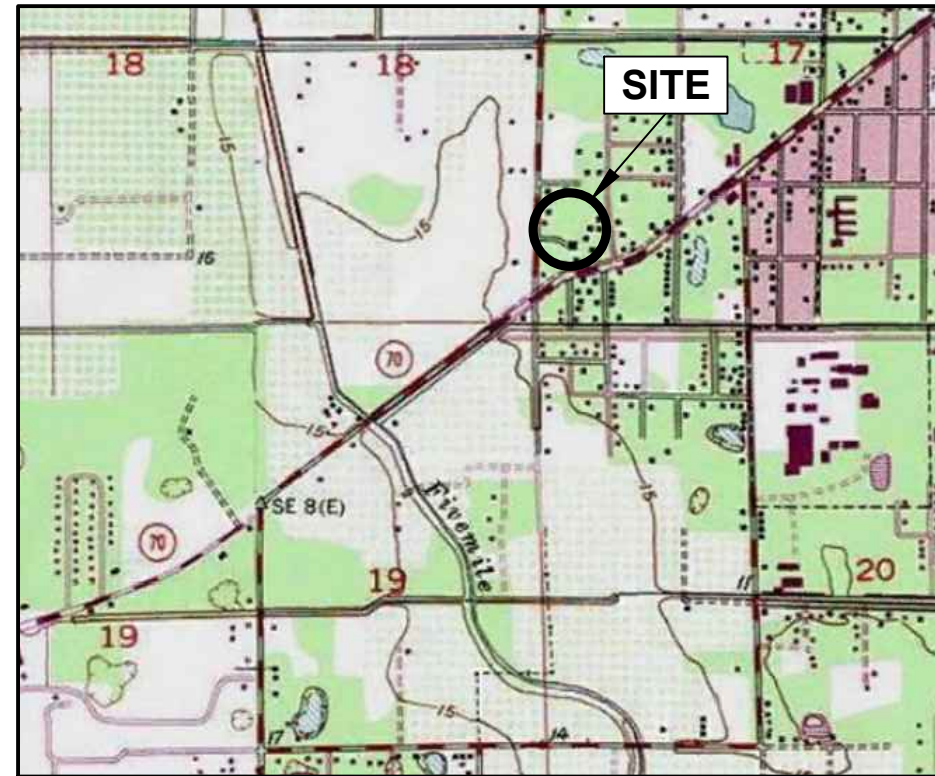
David P. Andre, P.E.  
Principal Engineer  
Fla. Reg. No. 53969

This report has been digitally signed by Peter G. Andersen, P.E. 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.

2021 AERIAL PHOTOGRAPH

USGS TOPOGRAPHIC QUADRANGLE MAP OF "Fort Pierce, FL"

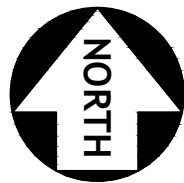
USDA SOIL SURVEY MAP



**PUBLIC LAND SURVEY SYSTEM**  
 Section 17, Township 35 South, Range 40 East

**ST. LUCIE COUNTY PROPERTY APPRAISER**  
 Parcel 2417-332-0006-000-8 (2.01 acres)  
 Parcel 2417-332-0005-000-1 (0.46 acres)

**USDA NRCS SOIL TYPES IN VICINITY OF SITE**  
 2: Ankona and Farnton sands  
 32: Pineda sand, 0 to 2 percent slopes



NOT TO SCALE

Graphical sources:  
 - Google Earth Pro  
 - QUADS/Earth Survey  
 - USDA NRCS Web Soil Survey



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834 SW Swan Avenue, Port St. Lucie, FL 34983 772-807-9191 www.AACEinc.com

**SITE VICINITY MAPS**





SUBSRFACE SOIL EXPLORATION  
 AND GEOTECHNICAL ENGINEERING EVALUATION  
 2006 HARTMAN ROAD  
 TREASURE COAST GENERAL CONTRACTORS  
 FORT PIERCE, ST. LUCIE COUNTY, FLORIDA

Drawn by: TCA  
 Checked by: PGA  
 AAEE File No: 22-309

Date: November 2022  
 Date: November 2022

**Figure No. 1**

**LEGEND**

- TB-#**  
 Standard Penetration Test Boring
- #**  
 Hand Auger Boring (HAB-#)
- EX-#**  
 Exfiltration Test
- DRI-#**  
 Double-Ring Infiltrometer Test

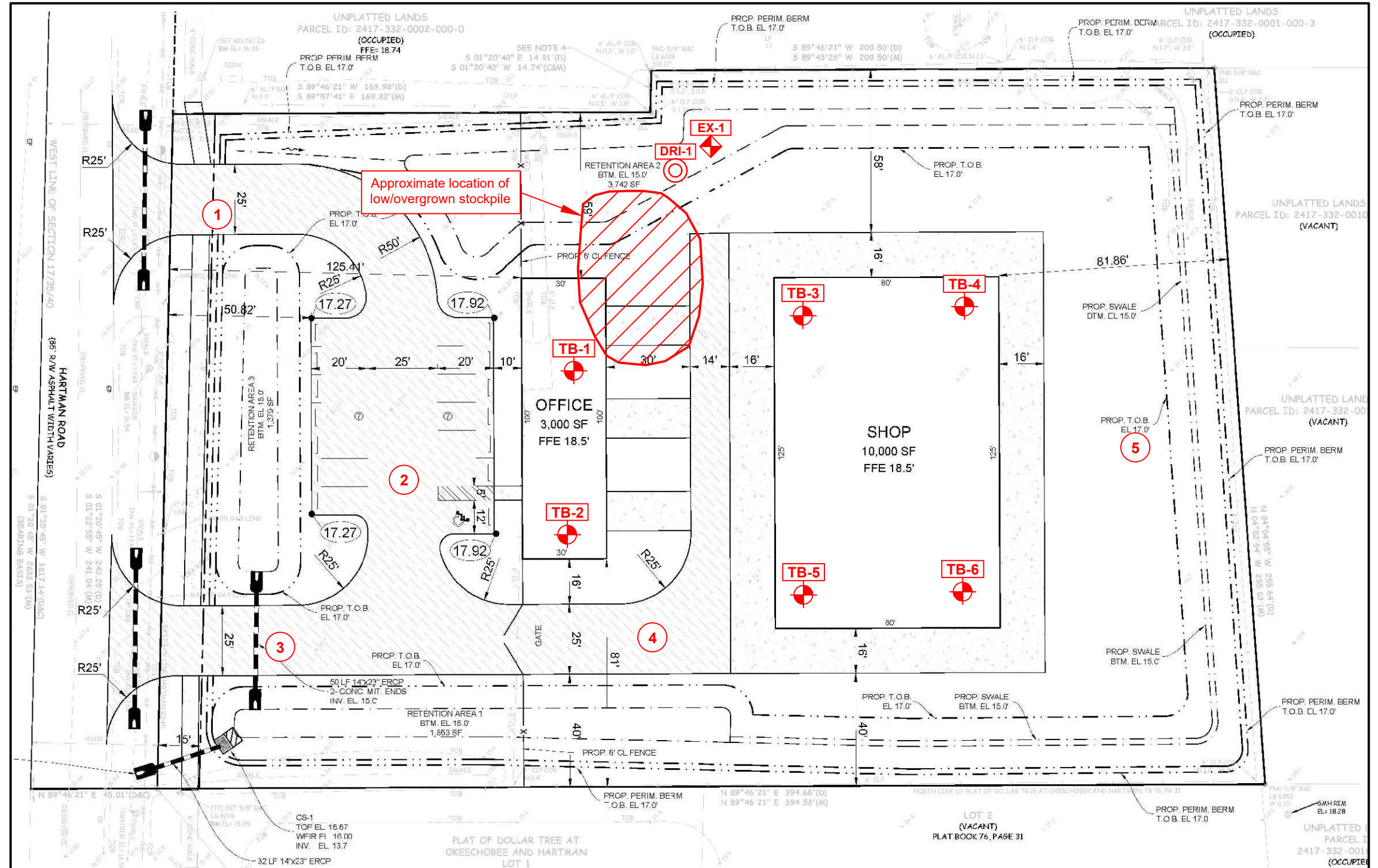
**NOTES**

Shown and noted field work locations are approximate, and were located using the provided site plan, aerial photographs, existing site features, and a hand-held GPS instrument. Atmospheric disturbances, forest canopy cover, local weather conditions, etc. may affect the accuracy of the GPS instrument readings. The shown field work locations should be considered accurate only to the degree implied by the method of measurement used.



**NOT TO SCALE**

Graphical source:  
 Preliminary Site Plan by LaConte Engineering (08/12/22)



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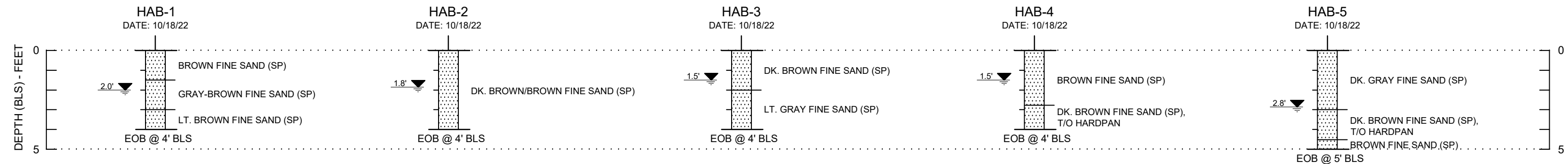
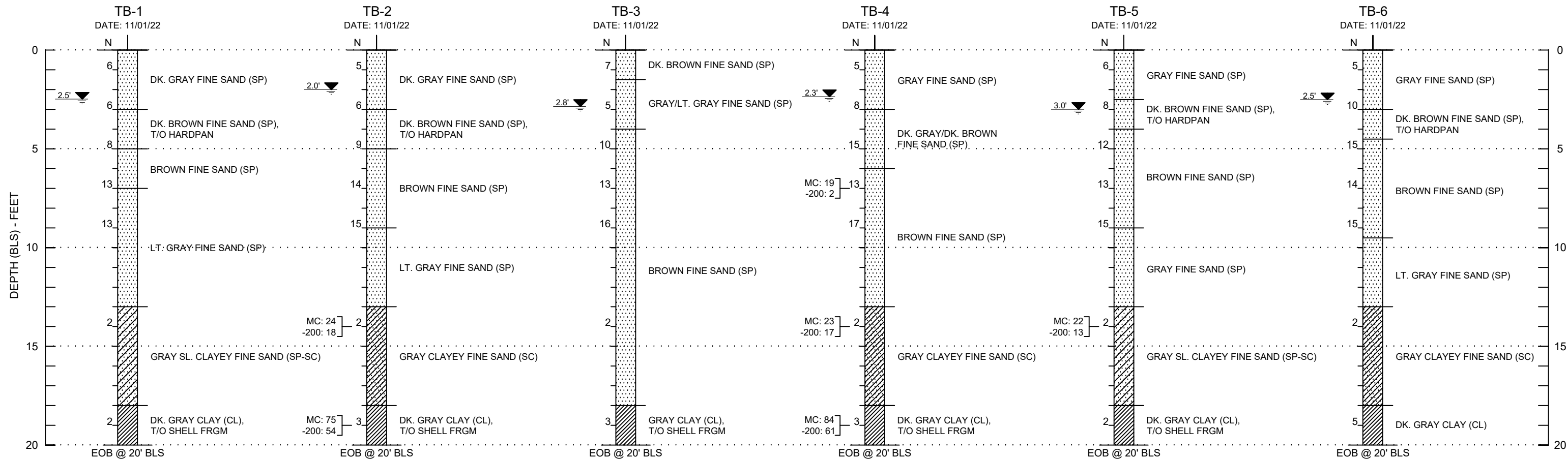
**FIELD WORK LOCATION PLAN**

SUBSURFACE SOIL EXPLORATION  
 AND GEOTECHNICAL ENGINEERING EVALUATION  
 2006 HARTMAN ROAD  
 TREASURE COAST GENERAL CONTRACTORS  
 FORT PIERCE, ST. LUCIE COUNTY, FLORIDA




Drawn by: TCA  
 Checked by: PGA  
 AAACE File No: 22-309

Date: November 2022  
 Date: November 2022

**Figure No. 2**




**SOIL GRAPHICAL LEGEND:**

-  FINE SAND (SP)
-  SLIGHTLY CLAYEY FINE SAND (SP-SC)
-  CLAYEY FINE SAND (SC)
-  CLAY (CL)

NOTE: 3"-6" of topsoil (sands with roots/organics) encountered in some borings (not shown on boring profiles)

**DRILLING NOTES:**

TB-#	STANDARD PENETRATION TEST [SPT] BORING (ASTM D1586)	DRILL CREW CHIEF: DT
N	SPT RESISTANCE IN BLOWS PER FOOT	DRILL RIG: CME-45
HAB	HAND AUGER BORING (ASTM D1452)	DRILLING METHOD: ROTARY-WASH/BENTONITE SLURRY
	GROUNDWATER TABLE (FT-BLS) AT TIME OF DRILLING	SPLIT-SPOON SAMPLER:
EOB	END OF BORING	INSIDE DIAMETER: 1.375"
BLS	BELOW LAND SURFACE	OUTSIDE DIAMETER: 2.0"
FRGM	FRAGMENTS	LENGTH: 24"
SP, SP-SC, SC, CL	UNIFIED SOIL CLASSIFICATION SYSTEM [USCS]	SPT HAMMER:
	USCS GROUPS DETERMINED BY VISUAL CLASSIFICATION	AVERAGE DROP: 30"
	EXCEPT FOR NOTED LABORATORY TESTS	WEIGHT: 140 LBS
MC	NATURAL MOISTURE CONTENT IN PERCENT (ASTM D2216)	TYPE: SAFETY/MANUAL
-200	PERCENT FINES PASSING THE NO. 200 SIEVE (ASTM D1140)	



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**SOIL BORING PROFILES**

SUBSURFACE SOIL EXPLORATION  
AND GEOTECHNICAL ENGINEERING EVALUATION  
2006 HARTMAN ROAD  
TREASURE COAST GENERAL CONTRACTORS  
FORT PIERCE, ST. LUCIE COUNTY, FLORIDA

Drawn by: PGA  
Checked by: DPA  
AAACE File No: 22-309

Date: November 2022  
Date: November 2022

**Sheet No. 1**

# **APPENDIX I**

## USDA Soil Survey Information



United States  
Department of  
Agriculture

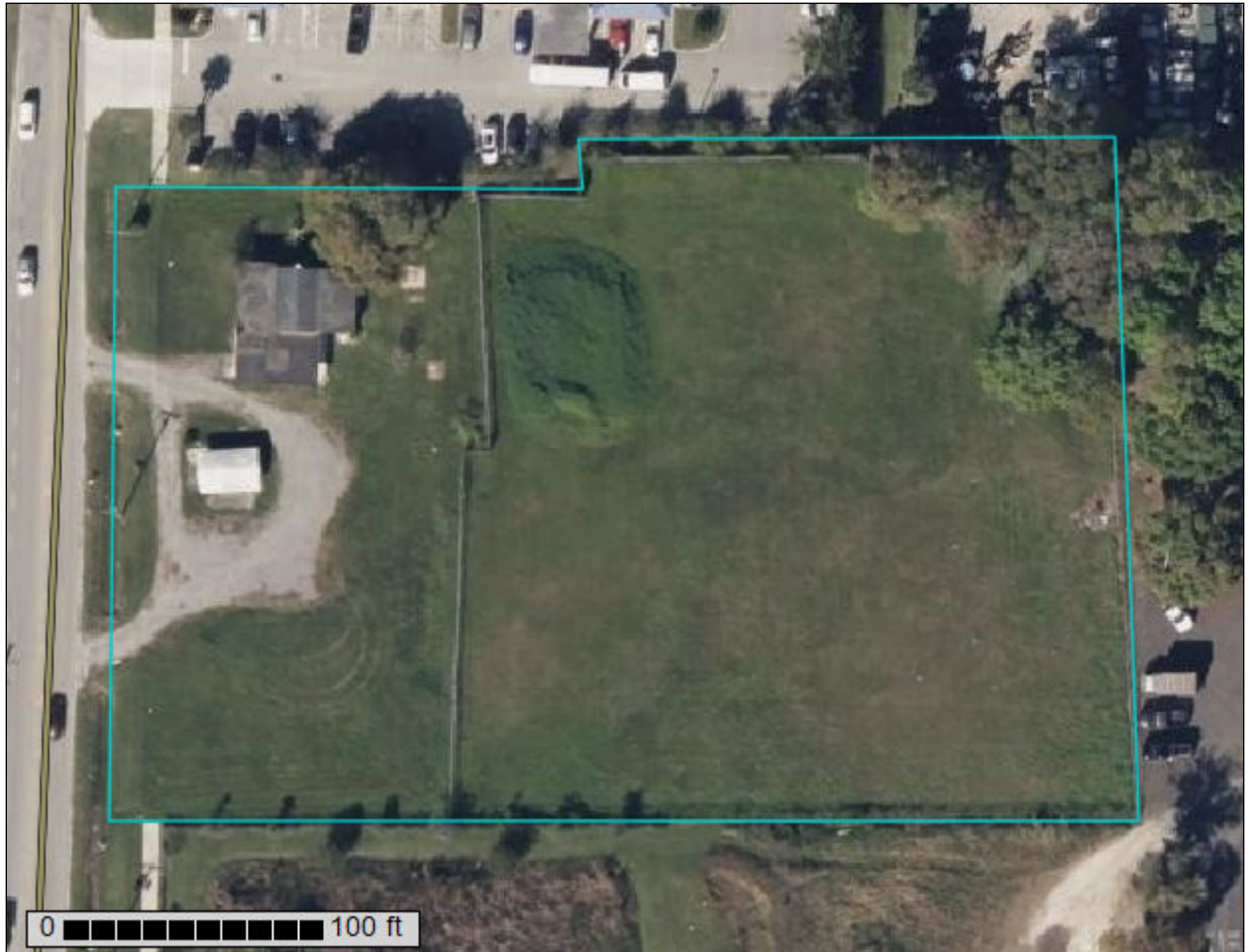
**NRCS**

Natural  
Resources  
Conservation  
Service

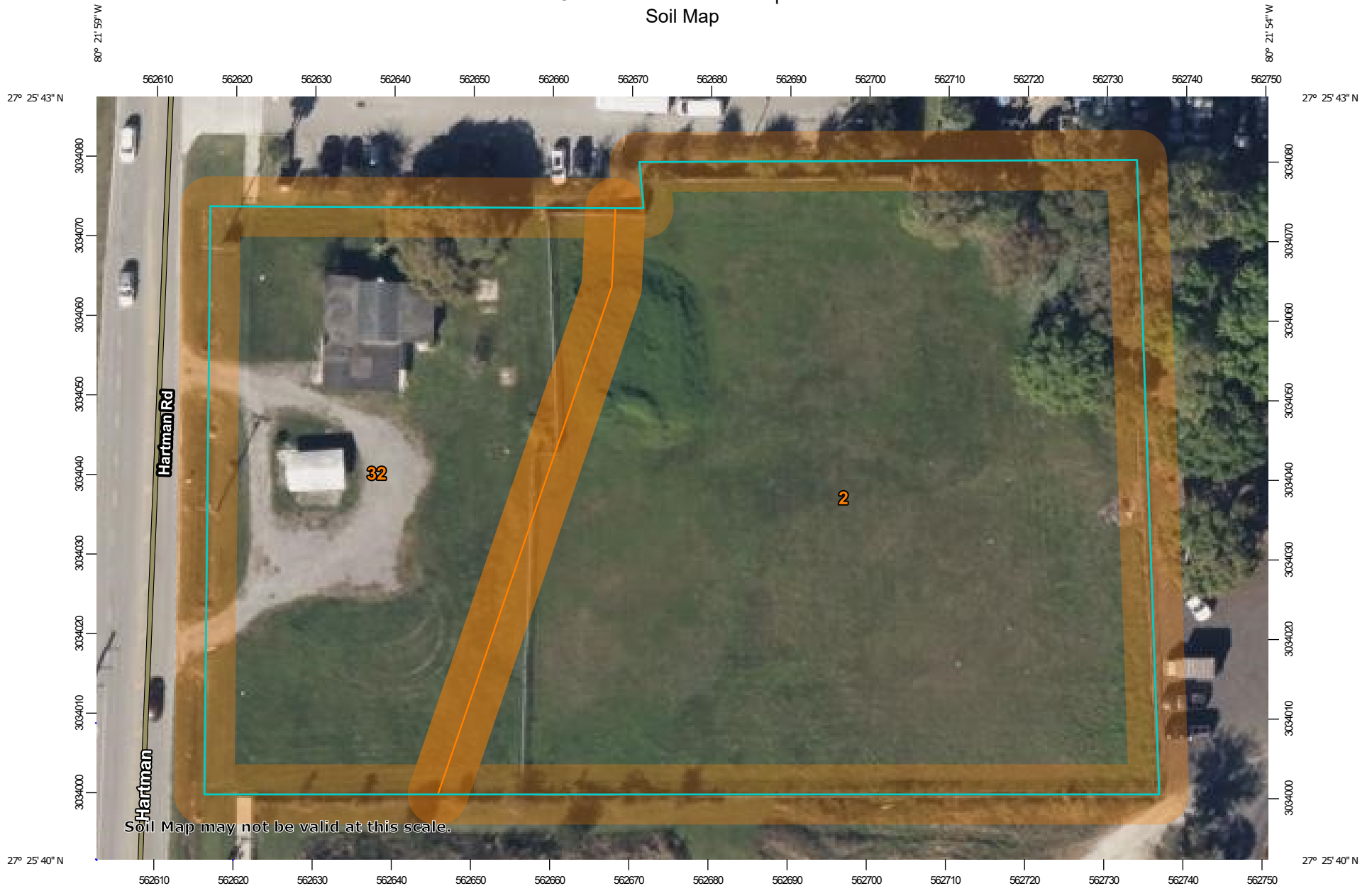
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **St. Lucie County, Florida**

## Hartman Drive

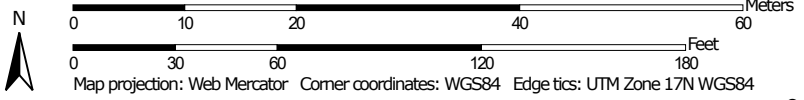


# Custom Soil Resource Report Soil Map




Soil Map may not be valid at this scale.

Map Scale: 1:677 if printed on A landscape (11" x 8.5") sheet.





### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Lucie County, Florida  
 Survey Area Data: Version 16, Sep 2, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 18, 2022—Jan 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farmton sands	1.5	66.4%
32	Pineda sand, 0 to 2 percent slopes	0.8	33.6%
<b>Totals for Area of Interest</b>		<b>2.3</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

## Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## St. Lucie County, Florida

### 2—Ankona and Farmton sands

#### Map Unit Setting

*National map unit symbol:* 1jptv  
*Elevation:* 0 to 200 feet  
*Mean annual precipitation:* 49 to 58 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Ankona and similar soils:* 50 percent  
*Farmton and similar soils:* 40 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Ankona

##### Setting

*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy and loamy marine deposits

##### Typical profile

*A - 0 to 11 inches:* sand  
*E - 11 to 38 inches:* sand  
*Bh - 38 to 48 inches:* loamy sand  
*Btg - 48 to 57 inches:* sandy loam  
*Cg - 57 to 80 inches:* loamy fine sand

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 31 to 50 inches to ortstein  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very low (about 1.5 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F156BY040FL - Sandy Pine Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)

## Custom Soil Resource Report

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G156BC141FL)  
*Hydric soil rating:* No

### Description of Farmton

#### Setting

*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Interfluve, tal  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 7 inches:* sand  
*E - 7 to 34 inches:* sand  
*Bh - 34 to 50 inches:* sand  
*Btg - 50 to 80 inches:* sandy loam

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Moderate (about 6.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F156BY040FL - Sandy Pine Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands  
(G156BC141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G156BC141FL)  
*Hydric soil rating:* No

### Minor Components

#### Electra

*Percent of map unit:* 4 percent  
*Landform:* Knolls on marine terraces, rises on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F156BY045FL - Sandy Scrubby Flatwoods on Rises and Knolls  
*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands  
(G156BC131FL)  
*Hydric soil rating:* No

**Waveland**

*Percent of map unit:* 3 percent  
*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F156BY040FL - Sandy Pine Flatwoods and Hammocks  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)  
*Hydric soil rating:* No

**Lawnwood**

*Percent of map unit:* 3 percent  
*Landform:* Marine terraces on flatwoods  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F156BY040FL - Sandy Pine Flatwoods and Hammocks  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)  
*Hydric soil rating:* No

**32—Pineda sand, 0 to 2 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2x1nb  
*Elevation:* 0 to 100 feet  
*Mean annual precipitation:* 47 to 58 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 355 to 365 days  
*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Pineda and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Pineda**

**Setting**

*Landform:* Flats on marine terraces, drainageways on marine terraces  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Parent material:* Sandy and loamy marine deposits

**Typical profile**

*A - 0 to 5 inches:* sand  
*E - 5 to 19 inches:* sand

## Custom Soil Resource Report

*Bw - 19 to 35 inches:* sand  
*Btg/E - 35 to 38 inches:* sandy loam  
*Btg - 38 to 60 inches:* sandy loam  
*Cg - 60 to 80 inches:* loamy sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 3 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 4 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* C/D  
*Forage suitability group:* Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)  
*Other vegetative classification:* Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)  
*Hydric soil rating:* Yes

### Minor Components

#### Malabar

*Percent of map unit:* 6 percent  
*Landform:* — error in exists on —  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)  
*Hydric soil rating:* Yes

#### Wabasso

*Percent of map unit:* 5 percent  
*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)  
*Hydric soil rating:* No

#### Valkaria

*Percent of map unit:* 2 percent  
*Landform:* Drainageways on flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear

## Custom Soil Resource Report

*Across-slope shape:* Linear, concave

*Other vegetative classification:* Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

*Hydric soil rating:* Yes

### **Brynwood**

*Percent of map unit:* 2 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, tal

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

*Hydric soil rating:* Yes

## **APPENDIX II**

### **General Notes** (Soil Borings, Sampling and Testing Methods)

**ANDERSEN ANDRE CONSULTING ENGINEERS, INC.**  
**SOIL BORING, SAMPLING AND TESTING METHODS**

**GENERAL**

Andersen Andre Consulting Engineers, Inc. (AACE) borings describe subsurface conditions only at the locations drilled and at the time drilled. They provide no information about subsurface conditions below the bottom of the boreholes. At locations not explored, surface conditions that differ from those observed in the borings may exist and should be anticipated.

The information reported on our boring logs is based on our drillers' logs and on visual examination in our laboratory of disturbed soil samples recovered from the borings. The distinction shown on the logs between soil types is approximate only. The actual transition from one soil to another may be gradual and indistinct.

The groundwater depth shown on our boring logs is the water level the driller observed in the borehole when it was drilled. These water levels may have been influenced by the drilling procedures, especially in borings made by rotary drilling with bentonitic drilling mud. An accurate determination of groundwater level requires long-term observation of suitable monitoring wells. Fluctuations in groundwater levels throughout the year should be anticipated.

The absence of a groundwater level on certain logs indicates that no groundwater data is available. It does not mean that groundwater will not be encountered at that boring location at some other point in time.

**STANDARD PENETRATION TEST**

The Standard Penetration Test (SPT) is a widely accepted method of in situ testing of foundation soils (ASTM D-1586). A 2-foot (0.6m) long, 2-inch (50mm) O.D. split-barrell sampler attached to the end of a string of drilling rods is driven 24 inches (0.60m) into the ground by successive blows of a 140-pound (63.5 Kg) hammer freely dropping 30 inches (0.76m). The number of blows needed for each 6 inches (0.15m) increments penetration is recorded. The sum of the blows required for penetration of the middle two 6-inch (0.15m) increments of penetration constitutes the test result of N-value. After the test, the sampler is extracted from the ground and opened to allow visual description of the retained soil sample. The N-value has been empirically correlated with various soil properties allowing a conservative estimate of the behavior of soils under load. The following tables relate N-values to a qualitative description of soil density and, for cohesive soils, an approximate unconfined compressive strength (Qu):

<b>Cohesionless Soils:</b>	<b><u>N-Value</u></b>	<b><u>Description</u></b>
	0 to 4	Very loose
	4 to 10	Loose
	10 to 30	Medium dense
	30 to 50	Dense
	Above 50	Very dense

<b>Cohesive Soils:</b>	<b><u>N-Value</u></b>	<b><u>Description</u></b>	<b><u>Qu</u></b>
	0 to 2	Very soft	Below 0.25 tsf (25 kPa)
	2 to 4	Soft	0.25 to 0.50 tsf (25 to 50 kPa)
	4 to 8	Medium stiff	0.50 to 1.0 tsf (50 to 100 kPa)
	8 to 15	Stiff	1.0 to 2.0 tsf (100 to 200 kPa)
	15 to 30	Very stiff	2.0 to 4.0 tsf (200 to 400 kPa)
	Above 30	Hard	Above 4.0 tsf (400 kPa)

The tests are usually performed at 5 foot (1.5m) intervals. However, more frequent or continuous testing is done by AACE through depths where a more accurate definition of the soils is required. The test holes are advanced to the test elevations by rotary drilling with a cutting bit, using circulating fluid to remove the cuttings and hold the fine grains in suspension. The circulating fluid, which is bentonitic drilling mud, is also used to keep the hole open below the water table by maintaining an excess hydrostatic pressure inside the hole. In some soil deposits, particularly highly pervious ones, flush-coupled casing must be driven to just above the testing depth to keep the hole open and/or prevent the loss of circulating fluid. After completion of a test borings, the hole is kept open until a steady state groundwater level is recorded. The hole is then sealed by backfilling, either with accumulated cuttings or lean cement.

Representative split-spoon samples from each sampling interval and from different strata are brought to our laboratory in air-tight jars for classification and testing, if necessary. Afterwards, the samples are discarded unless prior arrangement have been made.

### **POWER AUGER BORINGS**

Auger borings (ASTM D-1452) are used when a relatively large, continuous sampling of soil strata close to the ground surface is desired. A 4-inch (100 mm) diameter, continuous flight, helical auger with a cutting head at its end is screwed into the ground in 5-foot (1.5m) sections. It is powered by the rotary drill rig. The sample is recovered by withdrawing the auger our of the ground without rotating it. The soil sample so obtained, is classified in the field and representative samples placed in bags or jars and returned to the AACE soils laboratory for classification and testing, if necessary.

### **HAND AUGER BORINGS**

Hand auger borings are used, if soil conditions are favorable, when the soil strata are to be determined within a shallow (approximately 5-foot [1.5m]) depth or when access is not available to power drilling equipment. A 3-inch (75mm) diameter hand bucket auger with a cutting head is simultaneously turned and pressed into the ground. The bucket auger is retrieved at approximately 6-inch (0.15m) interval and its contents emptied for inspection. On occasion post-hole diggers are used, especially in the upper 3 feet (1m) or so. Penetrometer probings can be used in the upper 5 feet (1.5m) to determine the relative density of the soils. The soil sample obtained is described and representative samples put in bags or jars and transported to the AACE soils laboratory for classification and testing, if necessary.

## **UNDISTURBED SAMPLING**

Undisturbed sampling (ASTM D-1587) implies the recovery of soil samples in a state as close to their natural condition as possible. Complete preservation of in situ conditions cannot be realized; however, with careful handling and proper sampling techniques, disturbance during sampling can be minimized for most geotechnical engineering purposes. Testing of undisturbed samples gives a more accurate estimate of in situ behavior than is possible with disturbed samples.

Normally, we obtain undisturbed samples by pushing a 2.875-inch (73 mm) I.D., thin wall seamless steel tube 24 inches (0.6 m) into the soil with a single stoke of a hydraulic ram. The sampler, which is a Shelby tube, is 30 (0.8 m) inches long. After the sampler is retrieved, the ends are sealed in the field and it is transported to our laboratory for visual description and testing, as needed.

## **ROCK CORING**

In case rock strata is encountered and rock strength/continuity/composition information is needed for foundation or mining purposes, the rock can be cored (ASTM D-2113) and 2-inch to 4-inch diameter rock core samples be obtained for further laboratory analyses. The rock coring is performed through flush-joint steel casing temporarily installed through the overburden soils above the rock formation and also installed into the rock. The double- or triple-tube core barrels are advanced into the rock typically in 5-foot intervals and then retrieved to the surface. The barrel is then opened so that the core sample can be extruded. Preliminary field measurements of the recovered rock cores include percent recovery and Rock Quality Designation (RQD) values. The rock cores are placed in secure core boxes and then transported to our laboratory for further inspection and testing, as needed.

## **SFWMD EXFILTRATION TESTS**

In order to estimate the hydraulic conductivity of the upper soils, constant head or falling head exfiltration tests can be performed. These tests are performed in accordance with methods described in the South Florida Water Management District (SFWMD) Permit Information Manual, Volume IV. In brief, a 6 to 9 inch diameter hole is augered to depths of about 5 to 7 feet; the bottom one foot is filled with 57-stone; and a 6-foot long slotted PVC pipe is lowered into the hole. The distance from the groundwater table and to the ground surface is recorded and the hole is then saturated for 10 minutes with the water level maintained at the ground surface.

If a constant head test is performed, the rate of pumping will be recorded at fixed intervals of 1 minute for a total of 10 minutes, following the saturation period.

## **LABORATORY TEST METHODS**

Soil samples returned to the AACE soils laboratory are visually observed by a geotechnical engineer or a trained technician to obtain more accurate description of the soil strata. Laboratory testing is performed on selected samples as deemed necessary to aid in soil classification and to help define engineering properties of the soils. The test results are presented on the soil boring logs at the depths at which the respective sample was recovered, except that grain size distributions or selected other test results may be presented on separate tables, figures or plates as discussed in this report.

**THE PROJECT SOIL DESCRIPTION PROCEDURE FOR SOUTHEAST FLORIDA**  
**CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES**

The soil descriptions shown on the logs are based upon visual-manual procedures in accordance with local practice. Soil classification is performed in general accordance with the United Soil Classification System and is also based on visual-manual procedures.

BOULDERS (>12" [300 MM]) and COBBLES (3" [75 MM] TO 12" [300 MM]):

**GRAVEL:**            Coarse Gravel:            3/4" (19 mm) to 3" (75 mm)  
                                  Fine Gravel:                No. 4 (4.75 mm) Sieve to 3/4" (19 mm)

Descriptive adjectives:

0 - 5%	– no mention of gravel in description
5 - 15%	– trace
15 - 29%	– some
30 - 49%	– gravelly (shell, limerock, cemented sands)

**SANDS:**

COARSE SAND:    No. 10 (2 mm) Sieve to No. 4 (4.75 mm) Sieve  
 MEDIUM SAND: No. 40 (425 μm) Sieve to No. 10 (2 mm) Sieve  
 FINE SAND:                No. 200 (75 μm) Sieve to No. 40 (425 μm) Sieve

Descriptive adjectives:

0 - 5%	– no mention of sand in description
5 - 15%	– trace
15 - 29%	– some
30 - 49%	– sandy

**SILT/CLAY:**            < #200 (75μM) Sieve

SILTY OR SILT:    PI < 4  
 SILTY CLAYEY OR SILTY CLAY: 4 ≤ PI ≤ 7  
 CLAYEY OR CLAY: PI > 7

Descriptive adjectives:

< - 5%	– clean (no mention of silt or clay in description)
5 - 15%	– slightly
16 - 35%	– clayey, silty, or silty clayey
36 - 49%	– very

**ORGANIC SOILS:**

<b>Organic Content</b>	<b>Descriptive Adjectives</b>	<b>Classification</b>
0 - 2.5%	Usually no mention of organics in description	See Above
2.6 - 5%	slightly organic	add "with organic fines" to group name
5 - 30%	organic	SM with organic fines  Organic Silt (OL) Organic Clay (OL) Organic Silt (OH)

**THE PROJECT SOIL DESCRIPTION PROCEDURE FOR SOUTHEAST FLORIDA  
CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES**

Organic Clay (OH)

**HIGHLY ORGANIC SOILS AND MATTER:**

<b>Organic Content</b>	<b>Descriptive Adjectives</b>	<b>Classification</b>
30 - 75%	sandy peat	Peat (PT)
	silty peat	Peat (PT)
> 75%	amorphous peat	Peat (PT)
	fibrous peat	Peat (PT)

**STRATIFICATION AND STRUCTURE:**

<b><u>Descriptive Term</u></b>	<b><u>Thickness</u></b>
with interbedded	
seam	-- less than ½ inch (13 mm) thick
layer	-- ½ to 12-inches (300 mm) thick
stratum	-- more than 12-inches (300 mm) thick
pocket	-- small, erratic deposit, usually less than 1-foot
lens	-- lenticular deposits
occasional	-- one or less per foot of thickness
frequent	-- more than one per foot of thickness
calcareous	-- containing calcium carbonate (reaction to diluted HCL)
hardpan	-- spodic horizon usually medium dense
marl	-- mixture of carbonate clays, silts, shells and sands

**ROCK CLASSIFICATION (FLORIDA) CHART:**

<b><u>Symbol</u></b>	<b><u>Typical Description</u></b>
LS	Hard Bedded Limestone or Caprock
WLS	Fractured or Weathered Limestone
LR	Limerock (gravel, sand, silt and clay mixture)
SLS	Stratified Limestone and Soils

**THE PROJECT SOIL DESCRIPTION PROCEDURE FOR SOUTHEAST FLORIDA**  
**CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES**

**LEGEND FOR BORING LOGS**

N:	Number of blows to drive a 2-inch OD split spoon sampler 12 inches using a 140-pound hammer dropped 30 inches
R:	Refusal (less than six inches advance of the split spoon after 50 hammer blows)
MC:	Moisture content (percent of dry weight)
OC:	Organic content (percent of dry weight)
PL:	Moisture content at the plastic limit
LL:	Moisture content at the liquid limit
PI:	Plasticity index (LL-PL)
qu:	Unconfined compressive strength (tons per square foot, unless otherwise noted)
-200:	Percent passing a No. 200 sieve (200 wash)
+40:	Percent retained above a No. 40 sieve
US:	Undisturbed sample obtained with a thin-wall Shelby tube
k:	Permeability (feet per minute, unless otherwise noted)
DD:	Dry density (pounds per cubic foot)
TW:	Total unit weight (pounds per cubic foot)

## **APPENDIX III**

### Exfiltration Test and DRI Test Reports

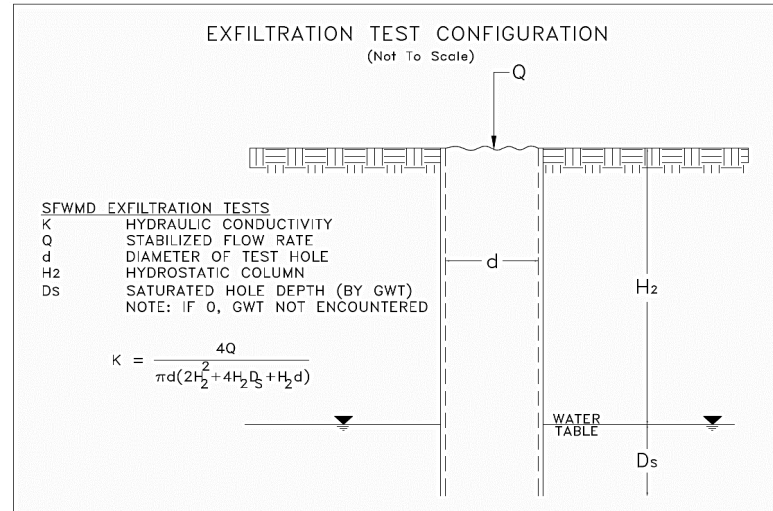


# ANDERSEN ANDRE CONSULTING ENGINEERS, INC.

## SFWMD Usual Open Hole Test

Test Number	<b>EX-1</b>	Project Name	2006 Hartman Road	Weather Conditions	Clear
		Project Number	22-309	Temperature	89F
		Test Location	Refer to Figure No. 2	Technician	RL/TM
		Date	10/27/2022	Engineer	PA

DIAMETER OF TEST HOLE (FEET): $d =$	0.5
DEPTH OF TEST HOLE (FEET): $H_1 =$	6
DEPTH TO WATER TABLE (FEET): $H_2 =$	2.5
SATURATED HOLE DEPTH (FEET): $D_s =$	3.5
METER READING (Gallons): $V_1 =$	0 @ 0.00 MIN
METER READING (Gallons): $V_F =$	3.3 @ 10.00 MIN
AVERAGE FLOW RATE (GPM) =	0.33
<b>"STABILIZED" FLOW RATE (CFS): <math>Q =</math></b>	<b>7.4E-04</b>
<b>HYDRAULIC CONDUCTIVITY (CFS / FT<sup>2</sup> - FT. HEAD): <math>K =</math></b>	<b>3.8E-05</b>



Soil Profile	
Depth (in-bls)	Description
0-8	Topsoil
8-24	Gray fine sand (SP)
24-48	Dark brown fine sand (SP), t/o hardpan
48-72	Light brown fine sand (SP)
Groundwater encountered @ 30" below grade	

**NOTES:**  
 The hydraulic conductivity test was performed in general accordance with the methods described in the South Florida Water Management District (SFWMD) Environmental Resource Permit Information Manual (Volume IV).  
 The K-value was calculated based on the exfiltration test procedure as shown hereon.  
 The presented hydraulic conductivity (K) value is applicable for an exfiltration trench installed at the same depth as the borehole test. The K-value represents an ultimate value. The designer should decide on the required factor of safety (minimum of 2, per SFWMD).



# ANDERSEN ANDRE CONSULTING ENGINEERS, INC.

## Double-Ring Infiltrometer Test Report (ASTM D3385)

Test Number	<b>DRI-1</b>	Technician	RL/TM
Project Name	2006 Hartman Road	Engineer	PA
Project Number	22-309	Weather Conditions	Clear
Test Location	Refer to Figure No. 2	Temperature	90F
Date	10/27/2022	Testing Liquid	Water

SOIL PROFILE	
Depth (in-bls)	Description
0-5	Topsoil (REMOVED)
5-30	Gray-brown fine sand (SP)
30-48	Dark brown fine sand (SP), t/o hardpan
Groundwater encountered @ 28" below grade	

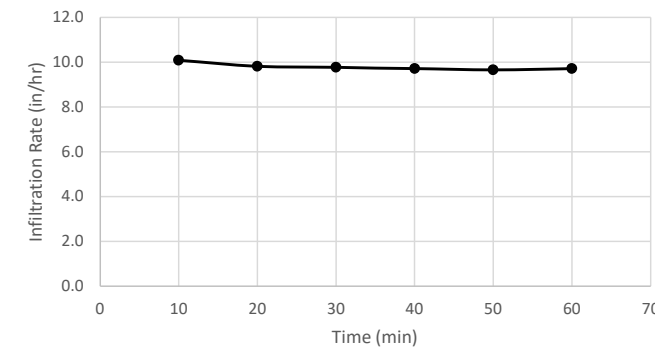
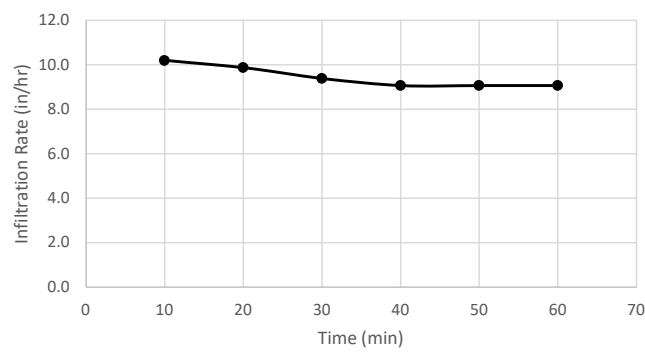
Area of Inner Ring (in <sup>2</sup> ):	113.1	Test Depth (in):	12	Depth of Water - Inner Ring (in):	6
Area of Annular Space (in <sup>2</sup> ):	339.3	Ring Seating (in):	6	Depth of Water - Annular Space (in):	6

Cycle No.	Incremental Test Time (min)	INNER RING			ANNULAR SPACE		
		Incremental Flow (ml)	Incremental Flow (in <sup>3</sup> )	Infiltration Rate (in/hr)	Incremental Flow (ml)	Incremental Flow (in <sup>3</sup> )	Infiltration Rate (in/hr)
1 (10 min)	1	315	19.2	10.20	935	57.1	10.09
2 (20 min)	1	305	18.6	9.87	910	55.5	9.82
3 (30 min)	1	290	17.7	9.39	905	55.2	9.77
4 (40 min)	1	280	17.1	9.06	900	54.9	9.71
5 (50 min)	1	280	17.1	9.06	895	54.6	9.66
6 (60 min)	1	280	17.1	9.06	900	54.9	9.71

Stabilized Infiltration Rate (in /hr): **9.1**

Stabilized Infiltration Rate (in /hr): **9.7**

**NOTES:**  
 ASTM D3385 recommends using the rate of the inner ring as the vertical infiltration rate if the rates for the inner ring and the annular space differ, since such difference in rates is likely due to divergent flow.  
  
 The designer should include an appropriate factor of safety when using the presented infiltration rates in the design of drainage improvements.



## **APPENDIX IV**

### AACE Project Limitations and Conditions

## **ANDERSEN ANDRE CONSULTING ENGINEERS, INC.**

### ***Project Limitations and Conditions***

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Andersen Andre Consulting Engineers, Inc. has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made herein. Further, the report, in all cases, is subject to the following limitations and conditions:

#### **VARIABLE/UNANTICIPATED SUBSURFACE CONDITIONS**

The engineering analysis, evaluation and subsequent recommendations presented herein are based on the data obtained from our field explorations, at the specific locations explored on the dates indicated in the report. This report does not reflect any subsurface variations (e.g. soil types, groundwater levels, etc.) which may occur adjacent or between borings.

The nature and extent of any such variations may not become evident until construction/excavation commences. In the event such variations are encountered, Andersen Andre Consulting Engineers, Inc. may find it necessary to (1) perform additional subsurface explorations, (2) conduct in-the-field observations of encountered variations, and/or re-evaluate the conclusions and recommendations presented herein.

We at Andersen Andre Consulting Engineers, Inc. recommend that the project specifications necessitate the contractor immediately notifying Andersen Andre Consulting Engineers, Inc., the owner and the design engineer (if applicable) if subsurface conditions are encountered that are different from those presented in this report.

No claim by the contractor for any conditions differing from those expected in the plans and specifications, or presented in this report, should be allowed unless the contractor notifies the owner and Andersen Andre Consulting Engineers, Inc. of such differing site conditions. Additionally, we recommend that all foundation work and site improvements be observed by an Andersen Andre Consulting Engineers, Inc. representative.

#### **SOIL STRATA CHANGES**

Soil strata changes are indicated by a horizontal line on the soil boring profiles (boring logs) presented within this report. However, the actual strata's changes may be more gradual and indistinct. Where changes occur between soil samples, the locations of the changes must be estimated using the available information and may not be at the exact depth indicated.

#### **SINKHOLE POTENTIAL**

Unless specifically requested in writing, a subsurface exploration performed by Andersen Andre Consulting Engineers, Inc. is not intended to be an evaluation for sinkhole potential.

## **MISINTERPRETATION OF SUBSURFACE SOIL EXPLORATION REPORT**

Andersen Andre Consulting Engineers, Inc. is responsible for the conclusions and recommendations presented herein, based upon the subsurface data obtained during this project. If others render conclusions or opinions, or make recommendations based upon the data presented in this report, those conclusions, opinions and/or recommendations are not the responsibility of Andersen Andre Consulting Engineers, Inc.

## **CHANGED STRUCTURE OR LOCATION**

This report was prepared to assist the owner, architect and/or civil engineer in the design of the subject project. If any changes in the construction, design and/or location of the structures as discussed in this report are planned, or if any structures are included or added that are not discussed in this report, the conclusions and recommendations contained in this report may not be valid. All such changes in the project plans should be made known to Andersen Andre Consulting Engineers, Inc. for our subsequent re-evaluation.

## **USE OF REPORT BY BIDDERS**

Bidders who are reviewing this report prior to submission of a bid are cautioned that this report was prepared to assist the owners and project designers. Bidders should coordinate their own subsurface explorations (e.g.; soil borings, test pits, etc.) for the purpose of determining any conditions that may affect construction operations. Andersen Andre Consulting Engineers, Inc. cannot be held responsible for any interpretations made using this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which may affect construction operations.

## **IN-THE-FIELD OBSERVATIONS**

Andersen Andre Consulting Engineers, Inc. attempts to identify subsurface conditions, including soil stratigraphy, water levels, zones of lost circulation, "hard" or "soft" drilling, subsurface obstructions, etc. However, lack of mention in the report does not preclude the presence of such conditions.

## **LOCATION OF BURIED OBJECTS**

Users of this report are cautioned that there was no requirement for Andersen Andre Consulting Engineers, Inc. to attempt to locate any man-made, underground objects during the course of this exploration, and that no attempts to locate any such objects were performed. Andersen Andre Consulting Engineers, Inc. cannot be responsible for any buried man-made objects which are subsequently encountered during construction.

## **PASSAGE OF TIME**

This report reflects subsurface conditions that were encountered at the time/date indicated in the report. Significant changes can occur at the site during the passage of time. The user of the report recognizes the inherent risk in using the information presented herein after a reasonable amount of time has passed. We recommend the user of the report contact Andersen Andre Consulting Engineers, Inc. with any questions or concerns regarding this issue.

# Important Information about Your Geotechnical Engineering Report

*Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.*

*While you cannot eliminate all such risks, you can manage them. The following information is provided to help.*

## **Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects**

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the report for any purpose or project except the one originally contemplated.*

## **Read the Full Report**

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

## **A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors**

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

## **Subsurface Conditions Can Change**

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

## **Most Geotechnical Findings Are Professional Opinions**

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

## **A Report's Recommendations Are *Not* Final**

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

### **A Geotechnical Engineering Report Is Subject to Misinterpretation**

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

### **Do Not Redraw the Engineer's Logs**

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

### **Give Contractors a Complete Report and Guidance**

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

### **Read Responsibility Provisions Closely**

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

### **Geoenvironmental Concerns Are Not Covered**

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

### **Obtain Professional Assistance To Deal with Mold**

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

### **Rely, on Your ASFE-Member Geotechnical Engineer for Additional Assistance**

Membership in ASFE/THE BEST PEOPLE ON EARTH exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

## **ASFE THE GEOPROFESSIONAL BUSINESS ASSOCIATION**

8811 Colesville Road/Suite G106, Silver Spring, MD 20910  
Telephone: 301/565-2733 Facsimile: 301/589-2017  
e-mail: info@asfe.org www.asfe.org

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See Attached



THE SUNRISE CITY  
**FORT PIERCE**  
 PLANNING DEPARTMENT  
*Florida*

## CONCURRENCY CAPACITY ANALYSIS

### I. Site Data:

	Existing Use	Future Land Use	Zoning
North			
South			
East			
West			

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	Vacant	General CO		2.28	
**Proposed	office/shop	General CO		2.28	N/A

### II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day <i>N/A</i>
**Proposed Zoning/FLU	Total gallons per day <i>off: a 450 GPD /shop 60 GPD = 510 GPD</i>
**Change in Demand	Total gallons per day <i>N/A</i>

<b>B. Wastewater:</b>	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

<b>C. Parks and Recreation (Residential Classifications Only):</b> (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
<del>Regional</del>	<del>20 acres per 1,000 people</del>			
<del>Urban District</del>	<del>5 acres per 1,000 people</del>			
<del>Community</del>	<del>2.5 acres per 1,000 people</del>			
<del>Neighborhood</del>	<del>1.36 acres per 1,000 people</del>			

<b>D. Public Schools (Residential Classifications Only):</b> Single Family: (du x 0.405 = students/70% K-8/30% High) Multi-family: (du x 0.207 = students/70% K-8/30% High)		
	<b>K-8</b>	<b>High</b>
<del>School Name</del>		
<del>City</del>		
<del>Distance</del>		
<del>Current Zoning/FLU</del>	<del>Enrollment</del>	
<del>**Proposed Zoning/FLU</del>	<del>Enrollment</del>	
<del>**Change in Demand</del>		

<b>E. Solid Waste: Residential</b> (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	
**Proposed Zoning/FLU	
*Change in Demand	

**F. Stormwater:**  
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

<b>Impact</b>	
---------------	--

**III. Transportation Analysis: Complete ITE Trip Generation Form (Attached)**

<b>G. Transportation Analysis: Complete ITE Trip Generation Data Form</b>		
Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	AM/PM Peak Hour Trips
<b>Demand Analysis</b>	Maximum	Maximum
<b>Current Zoning/FLU</b>		
<b>**Proposed Zoning/FLU</b>		
<b>*Change in Demand Impact to Capacity</b>	Trips	Trips

**IV. Project Description**

<b>PHASING</b>		
Is this project (phase) part of a larger project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.		
Total Project:	Residential Units:	Single Family:                      Multifamily:
	Non-residential (square footage):	<i>office 3,000 / shop 10,000</i>
Mixed-use (describe use):		
(If this is a single phase project, name it Phase I – Total)		

<b>RESIDENTIAL DATA</b>						
Type	Phase	Number of Units	Acres	Expected beginning date	Expected completion date	
Single-family, detached						
Single-family, attached						
Multi-family						
Other (specify)						

NON-RESIDENTIAL DATA					
Type(s) specify	Phase	Square footage	Acres	Expecting beginning date	Expected completion date
	1	3000 office 19,000 shop	2.28	N/A 2023	N/A 2024

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated.  Yes  No

- B. 1. Does this application involve demolition or re-use of any structure(s)?  Yes  No  
 If yes, what is the size of the structure(s) to be demolished or re-used? 1104
2. What is the current use of the structure to be demolished or re-used? Vacant
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site?  Yes  No  
 If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

\*\* Complete section if requesting a change in zoning, future land use, or expanding

**I. SITE DATA/DEVELOPMENT CONDITIONS**

- A. **BLDG Type 1: OFFICE**  
Floor space of Type 1 buildings 3,000 SF
- B. **BLDG Type 1: SHOP**  
Employees of Shop 4 EA

**II. WATER DEMAND Rates (based on land use descriptions, as indicated)**

Rates of Residential units are according to current FAC RULE 64E-6.008 Table I...

- A. **BLDG Type 1: OFFICE** S= 450 GPD  
Floor space of Type 1 buildings 3,000 SF  
per 100 sf of floor space 15 GPD
- B. **BLDG Type 1: SHOP** S= 60 GPD  
Employees of Shop 4 EA  
per Employee 15 GPD

**TOTAL WATER DEMAND ESTIMATE.....** **510 GPD**

**III. CALCULATIONS (Flow Factors)**

(over an estimated 24-hour day)

- 1. **Min. Daily Water Demand (0.5 x Total Water Demand Est.)** 255 GPD
- 2.a **Average Daily Flow, or ADF (1.0 x Total Water Demand Est.)** 510 GPD  
*(see calculations above)*
- 2.b **Equivalent Dwelling Units (EDU's) served by Project** 2 EDU's  
\* *Note: an EDU = 2.6 persons or 260 gallons/day*
- 2.c **Design Population Served by Project** 5 persons  
\* *Note: Design Population = # EDU's x 2.6 persons / EDU*
- 3. **Max. Day Water Demand (2.0 x Total Water Demand Est.)** 1,020 GPD  
*Fire Flow Demand (1 hr duration/day: [1 FH x 500 gpm/FH x 60 min./hr])* 30,000 GPD  
**Projected Fire Demand + Coincident Draft** 31,020 GPD
- 4. **Peak-Hour Flow Factor (based on type of Project)=** 4.0  
**Peak-Hour Water Demand (5.0 x Total Water Demand Est.)**  
ADF gal/day\*(1 day/24 hours)\*(1 hour/60 min.)\*5.0 1.4 GPM  
-or- 2,040 GPD

**IV. COMMENTS/ASSUMPTIONS (as applicable)...**

\* B. As applicable to Water Demand Rates according to current Fort Pierce Utility Authority Department Rating, all residential units shall be considered to have 2.6 persons per unit, with each unit having a water demand of 1 ERC (or EDU) or 260 gallons per day.  
*Note: an EDU = 2.6 persons or 260 gallons/day; Design Population = # EDU's x 2.6 persons / EDU.*



Treasure Coast General Contractors, LLC  
1720 Copenhaver Rd  
Fort Pierce, FL 34945  
[treasurecoastgc@gmail.com](mailto:treasurecoastgc@gmail.com)  
License# CGC1526542

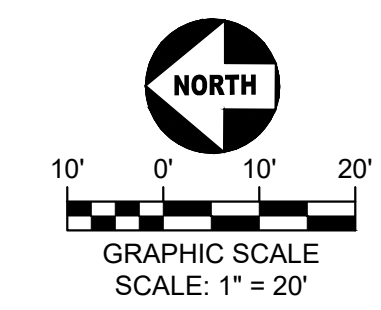
## Environmental Impact Report

### To Whom It May Concern:

The property located at 2006 Hartman Rd was Purchased by Wheaton Holdings, LLC. back in Dec 2021. The property was already cleared except a few Live Oaks in the NE corner of the property and (1) Live Oak on the NW corner. We have provided a tree survey and a Landscape plan in our proposed design review packet. There are no other existing trees or wetland areas on this property. We might be able to conserve the existing Live Oaks currently on the property depending on final site plan approval.

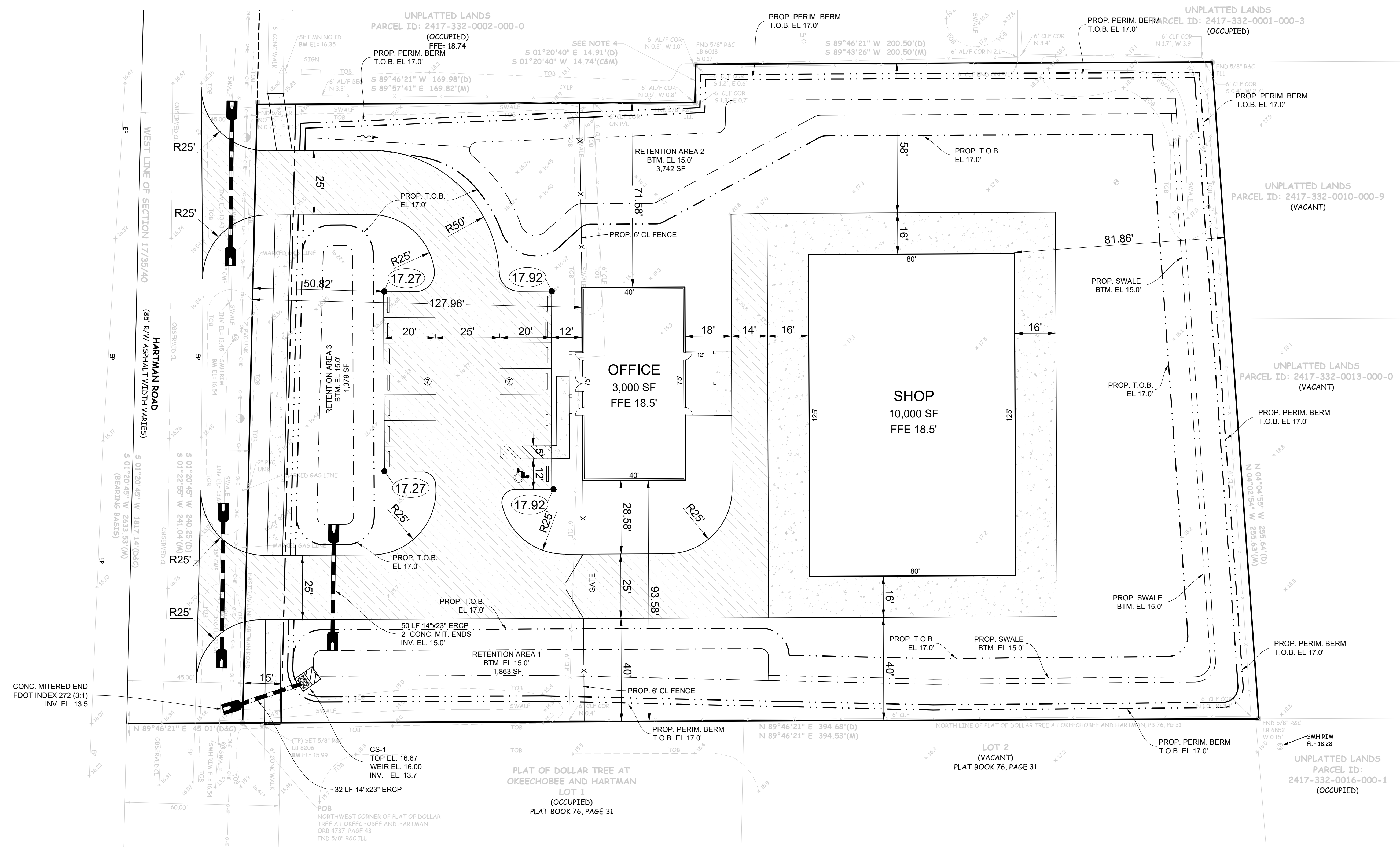
Sincerely,

Devin Wheaton  
Owner



**LEGEND**

- PROPOSED ASPHALT
- PROPOSED CONCRETE
- EXISTING TOPO
- PROPOSED ELEVATION



FLORIDA CA LICENSE NO. 30922

**LACONTE**  
**ENGINEERING**  
CIVIL ENGINEERING DESIGN & CONSULTING  
2440 SE Federal Hwy, Suite W, Stuart, Florida 34994 (772) 215-0354

NO.	DATE	REVISION	BY	WO
1	9/15/22	Rev. Site Layout - add drainage		
2	1/23/23	Rev. changed Bldg per Client		
3				
4				
5				
6				
7				
8				
9				

**TREASURE COAST GENERAL CONTRACTORS, LLC**  
**HARTMAN ROAD PARCEL**

**PRELIMINARY SITE PLAN**

FLORIDA

SEAL	SCALE 1" = 20'	DATE 8/12/22
FLORIDA 41070	DRAWN BY WAO	DESIGN BY P.JL
	DRAWING Hartman_base.dwg	SHEET NO. 1 OF 1

**I. SITE DATA/DEVELOPMENT CONDITIONS**

<b>A. BLDG Type 1: OFFICE</b>		
Floor space of Type 1 buildings		<b>3,000</b> SF
<b>B. BLDG Type 1: SHOP</b>		
Employees of Shop		<b>4</b> EA

**II. WATER DEMAND Rates (based on land use descriptions, as indicated)**

Rates of Residential units are according to current FAC RULE 64E-6.008 Table I...

<b>A. BLDG Type 1: OFFICE</b>	<b>S=</b>	<b>450</b>	<b>GPD</b>
Floor space of Type 1 buildings		<b>3,000</b>	SF
per 100 sf of floor space		<b>15</b>	GPD
<b>B. BLDG Type 1: SHOP</b>	<b>S=</b>	<b>60</b>	<b>GPD</b>
Employees of Shop		<b>4</b>	EA
per Employee		<b>15</b>	GPD

**TOTAL WATER DEMAND ESTIMATE.....** **510 GPD**

**III. CALCULATIONS (Flow Factors)**

(over an estimated 24-hour day)

<b>1. Min. Daily Water Demand (0.5 x Total Water Demand Est.)</b>		<b>255</b>	<b>GPD</b>
<b>2.a Average Daily Flow, or ADF (1.0 x Total Water Demand Est.)</b>		<b>510</b>	<b>GPD</b>
<i>(see calculations above)</i>			
<b>2.b Equivalent Dwelling Units (EDU's) served by Project</b>		<b>2</b>	<b>EDU's</b>
* Note: an EDU = 2.6 persons or 260 gallons/day			
<b>2.c Design Population Served by Project</b>		<b>5</b>	<b>persons</b>
* Note: Design Population = # EDU's x 2.6 persons / EDU			
<b>3. Max. Day Water Demand (2.0 x Total Water Demand Est.)</b>		<b>1,020</b>	<b>GPD</b>
<b>Fire Flow Demand (1 hr duration/day: [1 FH x 500 gpm/FH x 60 min./hr])</b>		<b>30,000</b>	<b>GPD</b>
<b>Projected Fire Demand + Coincident Draft</b>		<b>31,020</b>	<b>GPD</b>
<b>4. Peak-Hour Flow Factor (based on type of Project)=</b>		<b>4.0</b>	
<b>Peak-Hour Water Demand (5.0 x Total Water Demand Est.)</b>			
ADF gal/day*(1 day/24 hours)*(1 hour/60 min.)*5.0		<b>1.4</b>	<b>GPM</b>
	-or-	<b>2,040</b>	<b>GPD</b>

**IV. COMMENTS/ASSUMPTIONS (as applicable)...**

\* B. As applicable to Water Demand Rates according to current Fort Pierce Utility Authority Department Rating, all residential units shall be considered to have 2.6 persons per unit, with each unit having a water demand of 1 ERC (or EDU) or 260 gallons per day.  
 Note: an EDU = 2.6 persons or 260 gallons/day; Design Population = # EDU's x 2.6 persons / EDU.

# HARTMAN ROAD COMMERCIAL

2006 HARTMAN ROAD FORT PIERCE, FLORIDA

## IRRIGATION SPECIFICATIONS

### SYSTEM DESCRIPTION:

This is an automatic irrigation system. Water supply is a 1 1/2" Horse 110v Pump supplied by a 2" well (shown on plans). The system is looped and consists of 9 zones. Flow rate is a minimum of 63 GPM to the valves, which the Contractor shall verify with the municipality.

### SYSTEM PIPE:

All pipe shall be Class 200 PVC or heavier. System Main shall be Sch.40 PVC pipe. All fittings shall be solvent weld Sch.40 fittings unless otherwise indicated in these specifications. Do not use SxMIP adapters except for shrub risers. Class 200 PVC main line pipe. Main shall be pressure tested with all valves in place and prior to backfilling. Test shall be 100 PSI for one hour. Loss of 10 PSI within the hour shall constitute failure. Solvent weld fittings and pipe ends shall be cleaned with an all purpose PVC Pipe cleaner prior to applying glue. Main shall have a minimum of 24" of cover. All other pipe, laterals, etc. shall have a minimum 12" of cover. Backfill shall be free of debris and sharp objects. No rock larger than 3/4" shall be in contact with PVC pipe anywhere. All pipe above ground, with the exception of shrub risers, shall be galvanized, copper, bronze or ductile iron, and shall be painted with a flat black epoxy water proof paint. Shrub risers shall be Sch.40 or Sch.80 PVC and shall be painted with flat black epoxy paint.

### 1. Assembly for Solvent Weld PVC pipe:

- Cut square with PVC cutter, and deburr the cut prior to assembly.
- Clean PVC pipe with PVC cleaner prior to assembly.
- Use gray, heavy bodied, slow drying, high strength glue.
- Keep out of service for the length of time as specified by the Manufacturer of the PVC glue.

### SLEEVES:

All pipe under paving (walks, planter walls and drives, etc.) shall be sleeved with Sch. 40 galvanized pipe. Sleeves shall extend beyond the edge of pavement and shall be marked. The water line shall be installed in sleeve prior to installation of the sleeve. Cap ends of water line during construction to prevent debris from entering. Sleeves under roads shall have a minimum cover of 18 inches.

### SPRINKLERS:

All sprinklers shall be the type referred to in the Irrigation Key and shall be attached to the lateral with either flexible line (swing pipe) or a PVC swing joint such as those manufactured by Lasco, Rainbird or Dura Industries, specifically for irrigation use, being constructed with components utilizing Acme threads and o-ring seals. Pressure rating shall be 200 PSI, or greater, as stated by the manufacturer. Sprinklers using more than 4 GPM shall be connected utilizing PVC swing joints. Barbed fittings shall be same size as sprinkler inlet. Sprinklers shall be set flush with final grade and absolutely vertical.. Use Stainless Steel risers on all rotor heads.

1. Spray heads shall be Rainbird 1806, 6" pop-up heads with series 10, 8 or 5 nozzles, unless otherwise specified in these drawings.

2. Spray heads in shrub areas shall be shrub adapters on Sch.40 risers. Height to be established by landscape architect. This plan requires 18" risers. Risers shall NOT be used next to paved areas and pedestrian walks where they are exposed to damage. In these areas use 12" pop-ups. Paint shrub risers with water proof black epoxy paint.

### CONTROLLERS:

RAINBIRD ESP-Me3 4-22 Stations to operate 9 sections + master valve. Controller shall be located on the east wall of the shop building as shown on the plans. Grounding shall be equal to - or better than the manufacturer's recommendation. It shall also comply with the National Electrical Code. Both of these requirements preclude using the building or electrical supply line for grounding purposes. UL approved Ground Rod shall be utilized unless otherwise specified, or if the minimum resistance reading cannot be made. If minimum grounding cannot be made, utilize grounding plates until specified resistance is met.

### RAIN SHUT-OFF DEVICE:

Install a rain shut-off device out of the range of the sprinklers as per State DER requirements. Submit manufacturers equipment sheet prior to installation of any such device. Specified model is Rainbird WR2-RFC Wireless sensor and timer.

### ELECTRIC CONTROL VALVES:

RAINBIRD PGA 24V electric control valves. All valves shall be housed in 16" x 12" rectangular Carson 1419B valve boxes or larger, and installed as per details. Control Valve shall be rated at 150 PSI or higher. Use bottom inlet whenever possible.

### CONTROL WIRE:

Control wire shall be UL approved, solid core, PE or PVC covered irrigation control wire. SIZE: Use a minimum of 14 gage control and 12 gage bond wire. All splices and connections shall be made at pull boxes or valve boxes. (No field splices). Communication wire shall be as recommended by manufacturer. All splices shall be made with 3M brand DBY -6 Direct Burial Splice Kit. All wire to be encased in UL approved PVC conduit. All wire to be brought back to controller. Wire pull boxes shall be 10" round Ametek or other approved boxes. Wire which is not rated for direct burial shall be installed in water tight conduit with water tight junction boxes.

### IRRIGATION PUMP:

Install pump model 1-1/2 Horse GT Irri-Gator corrosion Resistant self priming, 115V, 1 PH ODP, Model GT15. Locate within pre-cast concrete enclosure on 4-inch concrete slab where shown on plans. Contractor to wire to Controller in accordance with manufacturers and municipal standards and specifications.

### MAINTENANCE:

It is the contractors responsibility to maintain the system, repairing leaks, repairing broken heads, adjusting sprinkler heads, flushing system, etc. until final acceptance by the Owner. Contractor shall instruct Owners maintenance personnel as to maintenance requirements for this irrigation system. Site shall be cleaned daily of trash and debris.

### AS-BUILT DRAWINGS:

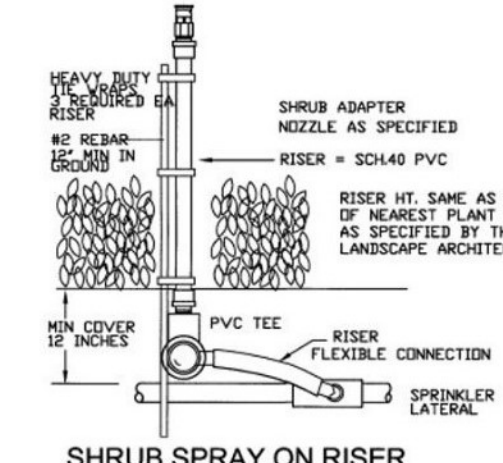
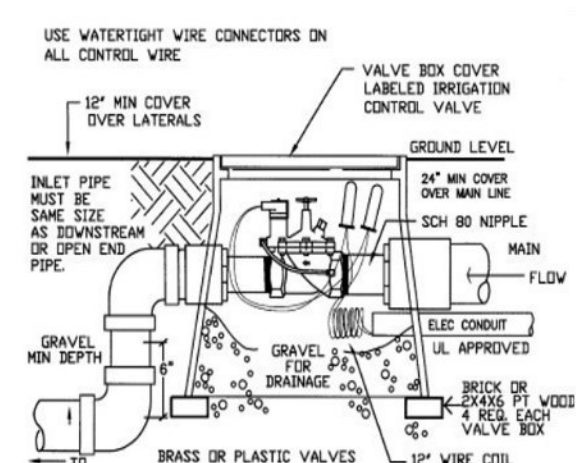
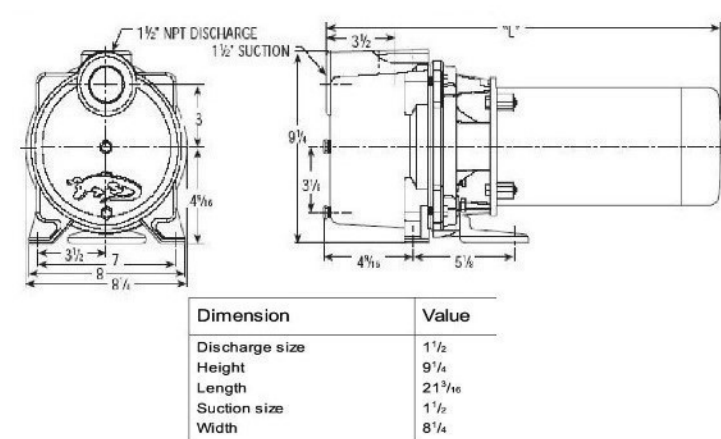
Contractor shall provide "as-built" drawings showing all changes. All valves and changes of direction on the main line shall have GPS coordinates noted on the as-built drawings. Controller program shall be part of this submission.

### GUARANTEE:

The entire system shall be guaranteed for a period on one year from the time of final acceptance. All manufacturers written warranties and guarantees, as well as "as-built" drawings, maintenance and operational information, shall be turned over to the Owner prior to, and is a condition of final acceptance. Guarantee period shall not commence until all of the documents have been turned over to the Owners representative.

## IRRIGATION DETAILS

### GT IRRI-GATOR Corrosion Resistant Self Priming Pumps MODEL : GT15

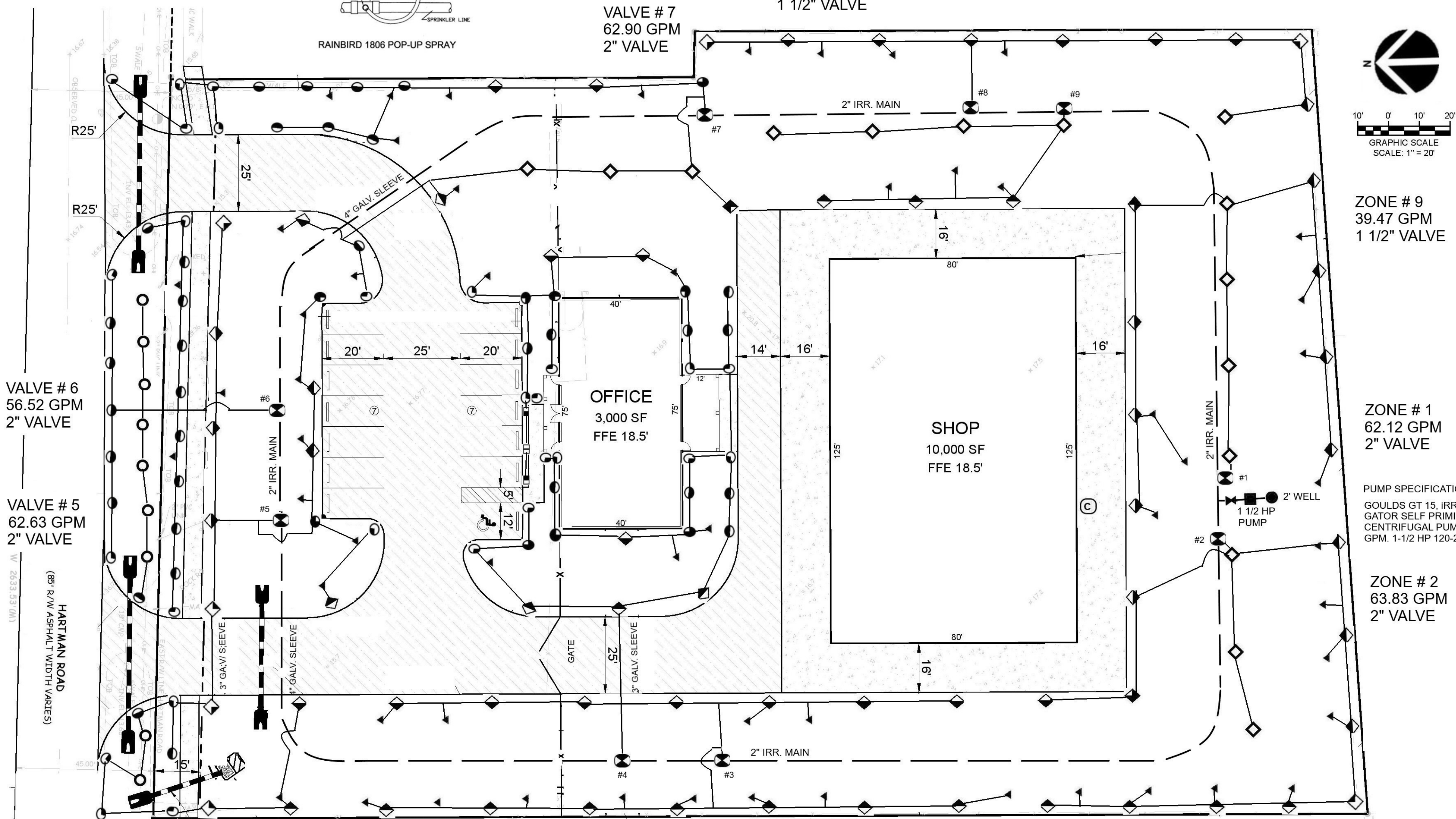


# FEBRUARY 21, 2023

# IRRIGATION PLAN

## MATERIALS KEY

- FULL CIRCLE Rainbird A17F Shrub Nozzle
- 3/4 CIRCLE/ADJUSTABLE Rainbird A17AP Shrub Nozzle
- ◐ HALF CIRCLE Rainbird A17H Shrub Nozzle
- ◑ QUARTER CIRCLE Rainbird A17Q Shrub Nozzle
- ◒ FULL CIRCLE Rainbird 5006-MPR-35
- ◓ HALF CIRCLE Rainbird 5006-MPR-35
- ◔ QUARTER CIRCLE Rainbird 5006-MPR-35
- ◕ THREE QUARTER CIRCLE Rainbird 5006-MPR-35
- ◻ CENTER STRIP Rainbird A17CST Shrub Nozzle
- ◼ END STRIP Rainbird A17EST Shrub Nozzle
- ◂ BUBBLER Rainbird 5CSTB. To be used with Shrub Adapter PA8S
- ◃ 24 VOLT PEB ELECTRIC CONTROL VALVE
- Ⓢ CONTROLLER Rainbird ESP-ME3 - 10 Station with WR2 Series Wireless Rain Sensor.
- ⌘ GATE VALVE
- ◄ NOTE: BUBBLERS ARE TO BE LOCATED AT BASE OF TREES AND PALMS WHERE SHOWN ON PLAN. PLACE ON 5" BLACK 3/4" POLY PIPE



# HARTMAN ROAD COMMERCIAL

2006 HARTMAN ROAD FORT PIERCE, FLORIDA

## PLANT LIST

KEY QTY BOTANICAL NAME COMMON NAME N\* WW\* SIZE/SPECIFICATIONS

### TREES

QL	13	Quercus laurifolia	Laurel Oak	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
QV	16	Quercus virginiana	Live Oak	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
MA	9	Magnolia grandiflora	Magnolia 'Little Gem'	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
PT	9	Simarouba glauca	Paradise Tree	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
GL	4	Bursera simaruba	Gumbo Limbo	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
TP	3	Tabebuia rosea	Pink Trumpet Tree	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
DH	5	Ilex cassine	Dahoon Holly	X	X	12' Ht., 2 1/2" DBH., 65 Gal.

### PALMS

FP	7	Wodyetia bifurcata	Foxtail Palm			8' Ht. Grey Wood
SP	24	Sabal palmetto	Sabal Palm	X	X	10'-14' Ht., Smooth Trunk

### SHRUBS

YA	158	Illicium parviflorum	Yellow anise	X	X	3 Gal., 24" Ht.
CO	193	Chrysobalanus icaco	Cocoplum 'Red Tip'	X	X	3 Gal., 24" Ht.
DC	162	Clusia guttifera 'Dwarf'	Dwarf Clusia	X	X	3 Gal., 24" Ht.
FB	141	Hamelia patens, Dwarf	Firebush, Dwarf	X	X	3 Gal., 24" Ht.
ING	68	Ixora 'Nora Grant'	Nora Grant Ixora	X	X	3 Gal., 24" Ht.
SV	138	Viburnum suspensum	Sandankwa viburnum	X	X	3 Gal., 24" Ht.
YH	28	Ilex vomitoria 'Shillings'	Ilex Vomitoria 'Shillings'	X	X	3 Gal., 24" Ht.
WV	222	Viburnum obovatum	Walter's Viburnum	X	X	3 Gal., 24" Ht.
GB	123	Conocarpus erectus	Green Buttonwood	X	X	3 Gal., 24" Ht.

### GROUNDCOVERS

PJ	111	Juniperus chinensis 'Parsonii'	Parson's Juniper	X		1 Gal.
SG	144	Tulbaghia violacea	Society Garlic	X		1 Gal.
LI	91	Liriope Muscari 'Emerald Goddess'	Liriope Emerald Goddess	X		1 Gal.
DL	88	Lantana montevidensis	Dwarf Lantana	X		1 Gal.
BH	18	Bougainvillea glabra	Bougainvillea 'Helen Johnson'	X		3 Gal.

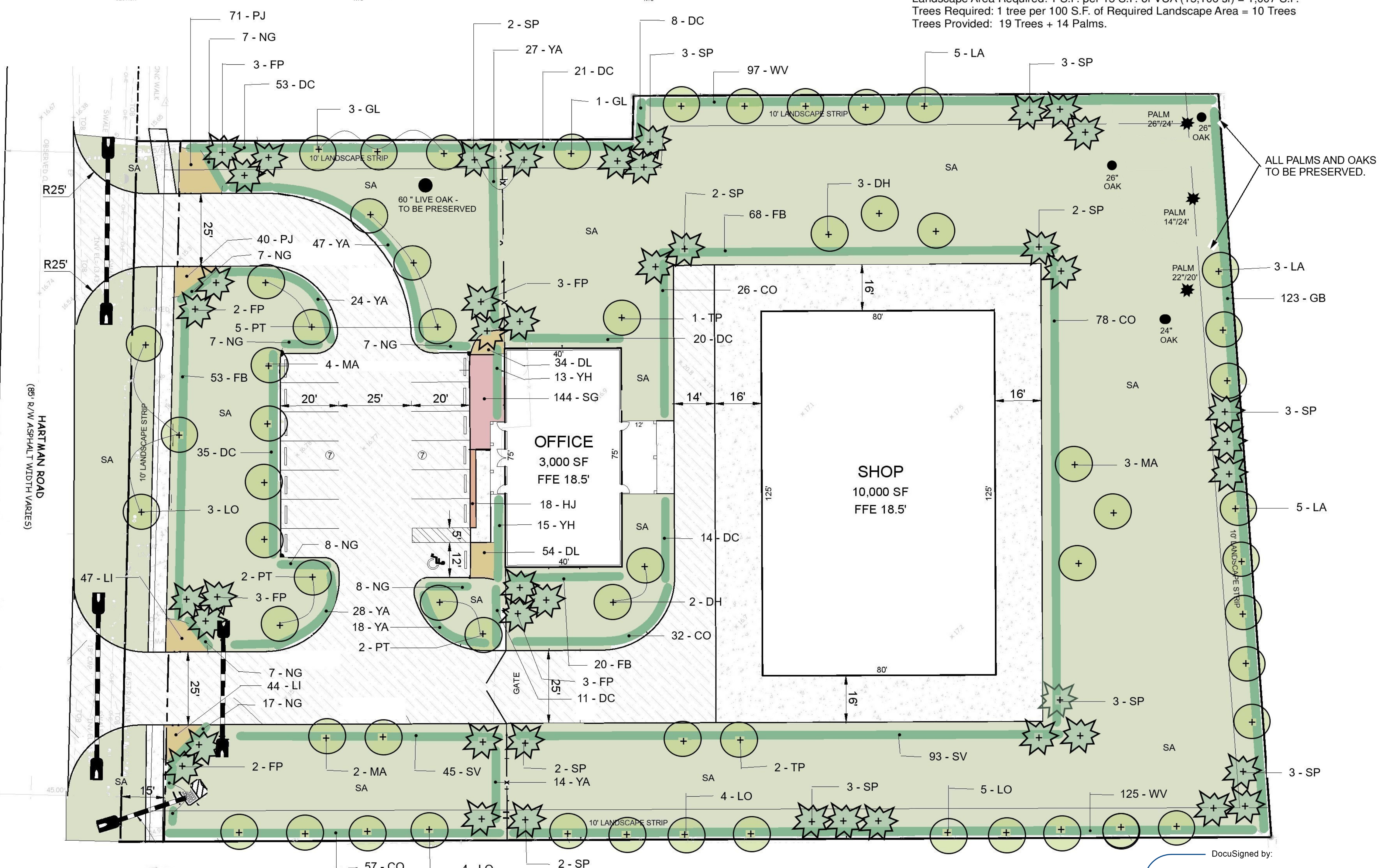
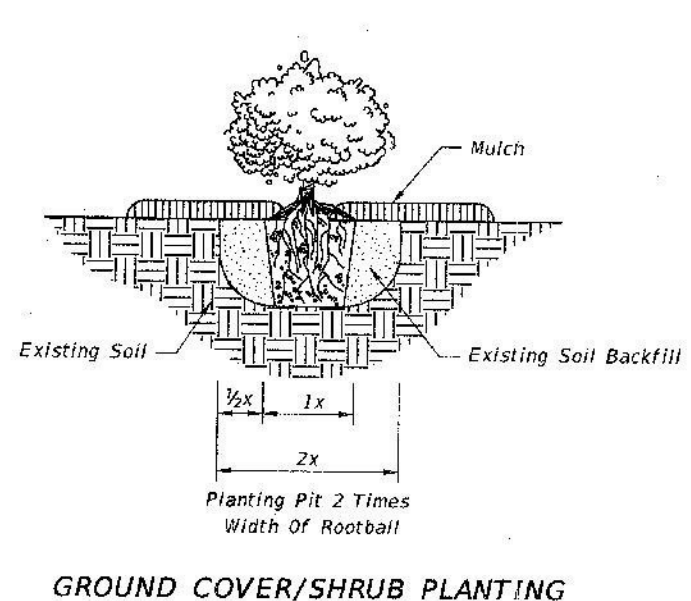
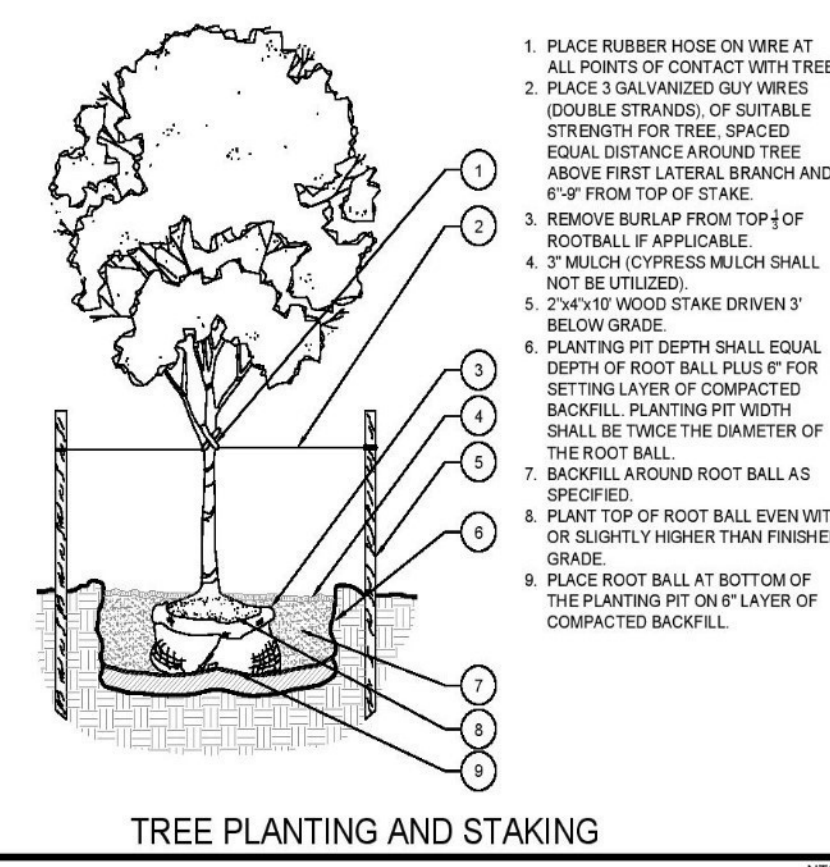
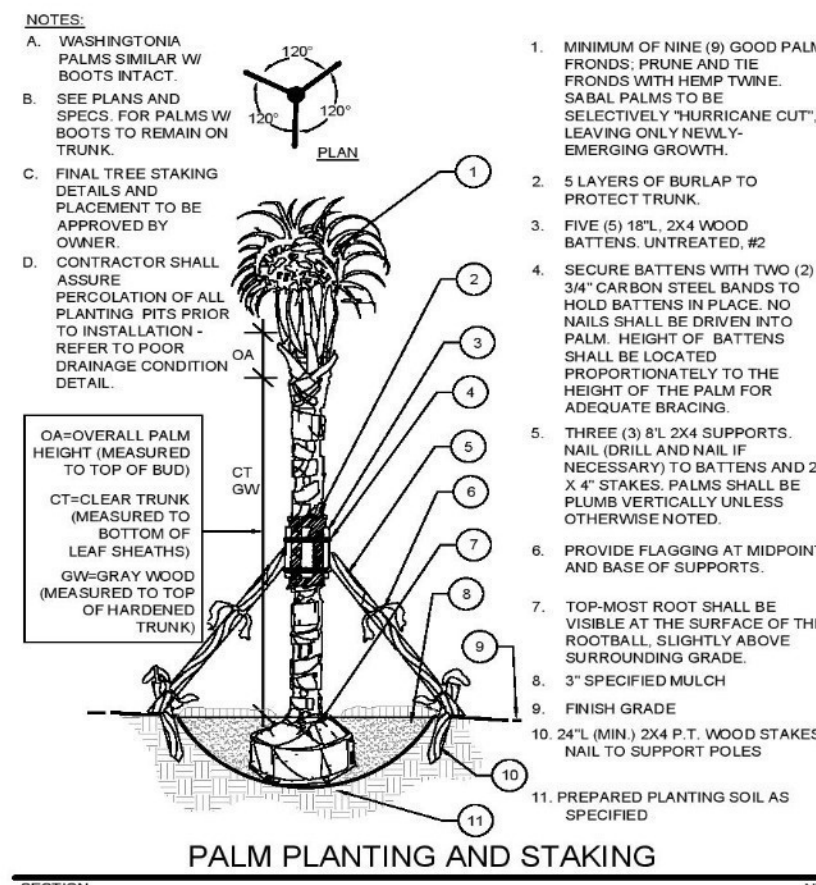
### LAWN GRASS

SA	per plan	Stenotaphrum secundatum	St. Augustine 'Floritam'			Solid sod
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NOTE: \* N = Florida Native; WW = Water Wise Drought tolerant

## PLANTING SPECIFICATIONS

- All plant materials shall be Florida Number 1 as provided in the most current edition of the "Grades and Standards for Nursery Plants, Parts I & II" prepared by the state Department of Agriculture and Consumer Services.
- All trees, shrubs and groundcovers shall be of the sizes as specified in the Plant List.
- Quantities listed on the Plant List are for estimating purposes. Contractor shall verify all quantities. Mulch, Topsoil, Fertilizer, etc. shall be included in the unit cost of the plants.
- Where there is a discrepancy either in quantities, plant names, sizes or specifications between the plan or Plant List, the plan takes precedence.
- All planting beds and water basins for trees shall be covered with a 3" minimum depth of shredded eucalyptus or Floramulch grade "B" or better. Refer to the Plant List for the specified mulch type. Alternative mulch material is required to be approved by Landscape Architect.
- The Planting Plan shall be installed in compliance with all existing codes and applicable deed restrictions.
- PLANTING SOIL: All trees and shrubs shall be planted with a minimum of 12" topsoil around and beneath the rootball. Minimum topsoil shall be 6" for groundcover areas.
- Planting soil to be a weed-free mixture of 50% sand and 50% mulch or other organic planting material suitable to the Landscape Architect.
- Contractor is responsible for determining all utility locations and installing facilities so as to not conflict. All damage to existing utilities or improvements caused by Contractor shall be repaired at no additional cost to the Owner.
- Contractor shall be responsible for providing final grading of all associated planting areas.
- After final grade, area to be raked to 6" depth and all rock and foreign inorganic materials removed and disposed of properly off site.
- All planting holes to be hand dug except where machine dug holes will not adversely affect or damage utilities or improvements (see note 7).
- No plunging of any tree or palm will be accepted. All plants to be planted at the nursery grade or slightly higher.
- Contractor shall stake and guy all trees and palms at time of planting as per the appropriate detail. Contractor is responsible for the maintenance and/or repair of all staking and guying during the Warranty Period and removal and disposal of staking after the establishment period.
- Fertilizer is required for plantings and shall be NPK 16-4-8 at 12.5 lbs/1000 s.f. or 345 lbs/acre. Nitrogen 50% slow release form and fertilizer to include secondary/minor micronutrients.
- SUBSTITUTIONS AND CHANGES: All substitutions and changes shall be approved in writing prior to installation. Any discrepancies between plans, site and specifications shall be brought to the immediate attention of the Landscape Architect, the Owner and governing municipality.
- WATERING: All plant material shall be watered in at time of planting in accordance with standard nursery practices. In addition, Contractor will continue watering of plant material until substantial completion and as needed and thereafter for a period of 2-months.
- All new plant material shall be guaranteed for 1-year from time of final acceptance of the project. Any plant material not in a healthy growing condition will be replaced by the Contractor at no additional cost to the Owner within 10-days of notification. For all replacement plant material, the warranty period shall be extended an additional 45-days beyond the original warranty period. All trees that lean or are blown over, caused by winds less than 75-MPH, will be re-set and braced by the contractor at no additional cost to the Owner.
- The successful bidder shall furnish to the Owner a unit price breakdown for all materials. The Owner may, at its discretion, add or delete from the materials utilizing the unit price breakdown submitted.
- No plant material will be accepted showing evidence of cable, chain marks, equipment scars, or otherwise damaged.
- Plant material will not be accepted when the ball of earth surrounding its roots has been cracked, broken or otherwise damaged.
- Root prune all field grown trees a minimum of 8-weeks prior to planting.



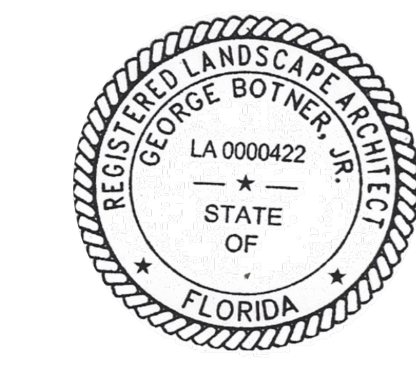
48 HOURS BEFORE DIGGING  
 CALL TOLL-FREE  
**1-800-432-4770**  
 SUNSHINE STATE ONE CALL  
 OF FLORIDA, INC  
 UNDERGROUND UTILITIES NOTIFICATION CENTER

PREPARED BY:



**GEORGE BOTNER, PL, AICP**  
 LANDSCAPE ARCHITECTURE & PLANNING  
 4320 S E Cove Lake Circle, Suite # 104  
 Stuart, FL 34997 botnerg@aol.com  
 (954) 798-7158 (Cell) (772) 221-9558

FL REG. # 0000422



2/21/2023

DocuSigned by:

8EAB0685402B41A...

FEBRUARY 20, 2023

# PLANTING PLAN AND TREE MITIGATION

FT. PIERCE LANDSCAPE REQUIREMENTS

**Landscape Strips – Between Streets and VUA's and Retention Areas**  
 10' Strip, Trees per 300 SF  
 Trees Required: 6.33 trees  
 Trees Provided: 3 trees + 10 Palms (3.33-trees equivalent) = 6.33 trees

**Landscape Strips – Between VUA and Buildings and Other Properties**  
 10' Strip, Trees per 200 SF  
 Trees Required: 46 trees  
 Trees Provided: 30 trees + 22 Palms (7.33-trees equivalent) = 37.33 trees + Preserve, 30' Oak

**Interior Vehicular Use Areas -**  
 Landscape Area Required: 1 S.F. per 15 S.F. of VUA (15,106 sf) = 1,007 S.F.  
 Trees Required: 1 tree per 100 S.F. of Required Landscape Area = 10 Trees  
 Trees Provided: 19 Trees + 14 Palms.

ALL PALMS AND OAKS TO BE PRESERVED.

SW 6198

**Sensible Hue**

**SHERWIN-WILLIAMS®**

What can we help you find?

*Expert Pick***SW 6198**

# Sensible Hue

**FULL DETAILS** ^**LRV:** 46 ⓘ**RGB:** 182 / 181 / 171**Hex Value:** #B6B5AB**Available in:** Interior/Exterior**Location Number:** 216-C2

**Color Collections:** Color ID (Nurturer), Living Well (Unplug), Finest Whites & Neutrals (Cool Neutrals)

**Color Family(s):** Green

This rich gray hums with life – while a hint of green provides a vitality uncommon to neutrals. Bring a quiet energy to any space.

Get this color in a:



What can we help you find?



0 - \$0.00

SW 7006

SW 7007

SW 6252

SW 7656

SW 7000

*Expert Pick*

**SW 7006**

# Extra White

**FULL DETAILS**

**LRV:** 86

**RGB:** 238 / 239 / 234

**Hex Value:** #EEEEFA

**Available in:** Interior/Exterior

**Location Number:** 257-C1

**Color Collections:** Colormix Forecast 2019 (Shapeshifter), Color ID (Creative), Pottery Barn Kids (Fall/Winter), Pottery Barn Teen (Fall/Winter), Finest Whites & Neutrals (Finest Whites)

**Color Family(s):** White

For a clean and crisp look, this white does the trick. Its high light reflectivity makes it an ideal choice for trim and ceilings.

Feedback

SW 7006

**Extra White**





Treasure Coast General Contractors, LLC  
1720 Copenhaver Rd  
Fort Pierce, FL 34945  
[treasurecoastgc@gmail.com](mailto:treasurecoastgc@gmail.com)  
License# CGC1526542

## Project Description

### To Whom It May Concern:

The proposed site plan and architectural proposals proposed in this design review are for a new office & warehouse building for Treasure Coast General Contractors, LLC. We are a local general contractor who has been doing work in the City of Fort Pierce & St Lucie County since 2014. The owner Devin Wheaton and his wife Jaclyn Wheaton were born and raised in St Lucie County. We plan on having between 4-6 office employees at full capacity which may not happen right away but that is the end goal. The office will be by appt only if/when we need a new client meeting. The warehouse in the back will be used for material & tool storage only.

The office & warehouse will be CBS structures with split face block on front elevations with the office having a covered entry with open truss framing and stack stone applied to lower 3' of front elevation and columns.

Recent Notable projects completed by Treasure Coast General Contractors, LLC.

In City of Fort Pierce

Thirsty Turtle (Fort Pierce/Downtown)

Sunrise City Café Recent Remodel (Fort Pierce/Downtown)

Piehole Pizzeria (Fort Pierce/South Hutchinson Island)

Sincerely

Devin Wheaton  
Owner

### Property Identification

Site Address: 2006 HARTMAN RD  
Sec/Town/Range: 17/35S/40E  
Parcel ID: 2417-332-0005-000-1  
Jurisdiction: Fort Pierce

Use Type: 0100  
Account #: 26510  
Map ID: 24/17S  
Zoning: General Co

### Ownership

Wheaton Holdings LLC  
1720 Copenhaver RD  
Fort Pierce, FL 34945

### Legal Description

17 35 40 FROM NW COR OF SW 1/4 OF SEC RUN S 01-20-40 W 1815.75 FT, TH S 88-39-20 E 45 FT TO POB, TH N 89-46-21 E 394.67 FT, TH N 04-04-55 W 255.65 FT, TH S 89-46-21 W 200.49 FT, TH S 01-20-40 W 14.91 FT, TH S 89-46-21 W 170.02 FT, TH S 01-20-40 277.6 FT TO POB (99,317 SQFT / 2.28 AC) (OR 4737-43)

### Current Values

Just/Market Value:	\$81,200
Assessed Value:	\$81,200
Exemptions:	\$0
Taxable Value:	\$81,200



### Total Areas

Finished/Under Air (SF):	1,104
Gross Sketched Area (SF):	1,704
Land Size (acres):	2.28
Land Size (SF):	99,317

### Property taxes are subject to change upon change of ownership.

- Past taxes are not a reliable projection of future taxes.
- The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.

Taxes for this parcel: [SLC Tax Collector's Office](#)  
Download TRIM for this parcel: [Download PDF](#)

### Building Design Wind

### Speed

Occupancy Category	I	II	III
Speed	140	150	160
Sources/links:			

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.  
© Copyright 2023 Saint Lucie County Property Appraiser. All rights reserved.

@kk

CITY OF FORT PIERCE  
\*\*\* CUSTOMER RECEIPT \*\*\*

Batch ID: DANA                      3/22/23 01                      Receipt no: 14550

Year	Number	Type	SvcCd	Description	Amount
2023	7000009	PL		PLANNING DEPARTMENT	\$6390.00

2006 HARTMAN RD  
CK FR/TREASURE COAST GENERAL  
CONTRACTORS  
SITE PLAN & MISC

Tender detail

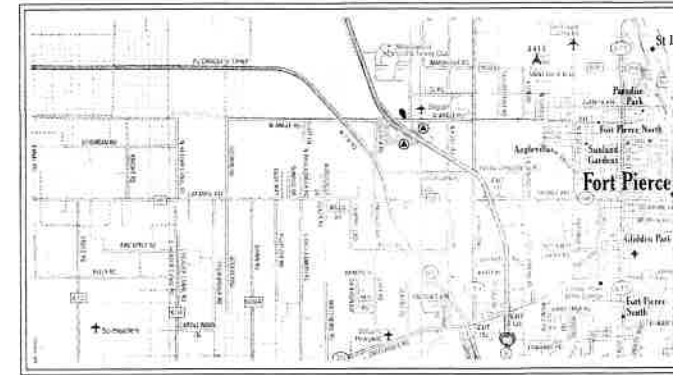
CH Ref#:	3510	\$6390.00
Total tendered:		\$6390.00
Total payment:		\$6390.00

Trans date: 3/22/23                      Time: 12:46:51

079530

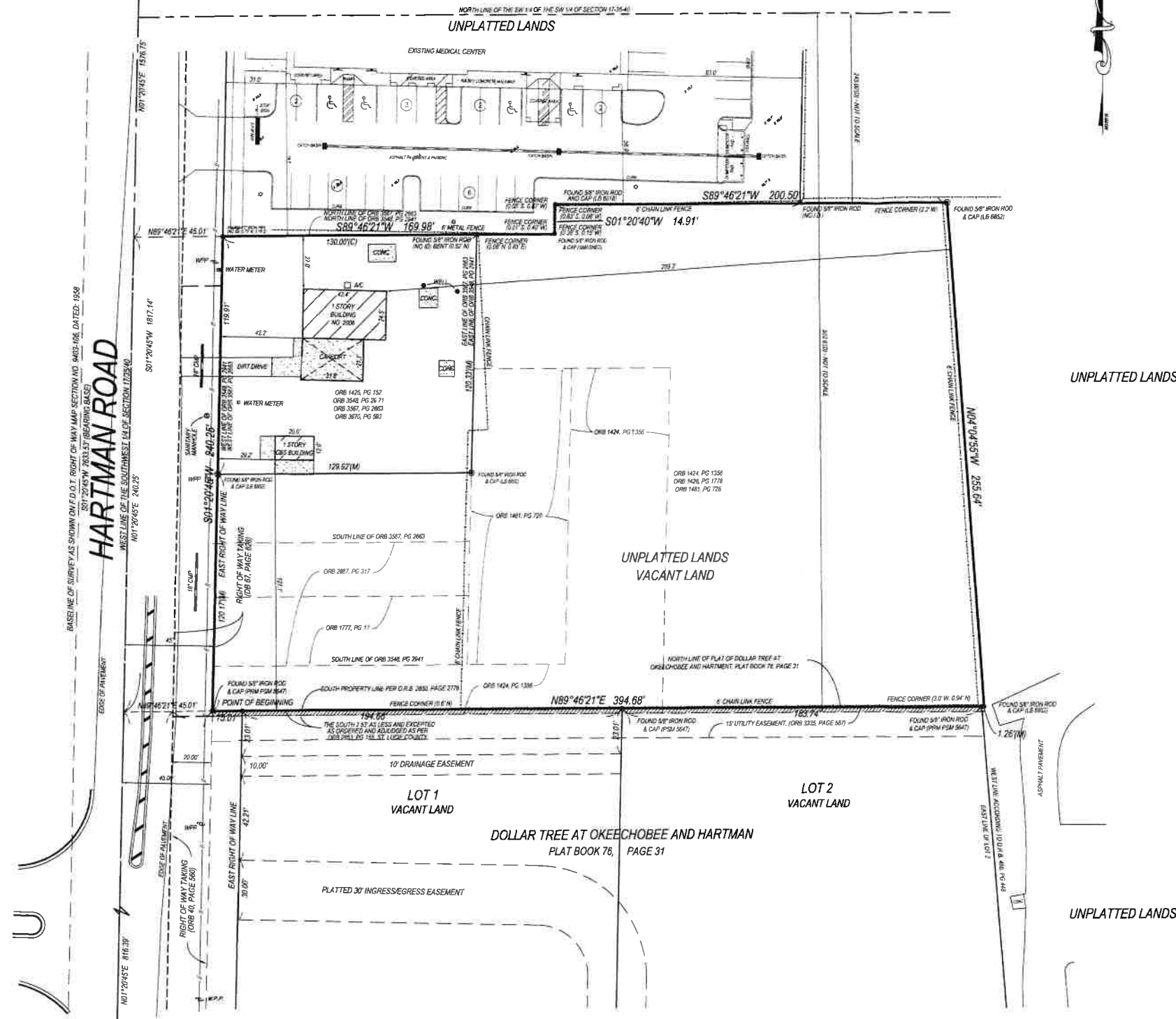
THANK YOU!

# BOUNDARY SURVEY



LOCATION MAP: NOT TO SCALE

POINT OF COMMENCEMENT  
FOUND RAILROAD SPIKE  
WEST 1/4 CORNER OF  
SECTION 17-35-40



### LEGAL DESCRIPTION:

A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST AND DESCRIBED IN DEEDS RECORDED IN OFFICIAL RECORDS BOOK 1424, PAGE 1398; OFFICIAL RECORDS BOOK 1428, PAGE 1178; OFFICIAL RECORDS BOOK 1481, PAGE 728; OFFICIAL RECORDS BOOK 1777, PAGE 17; OFFICIAL RECORDS BOOK 2867, PAGE 317; OFFICIAL RECORDS BOOK 3548, PAGE 2611; RE-RECORDED IN OFFICIAL RECORDS BOOK 3567, PAGE 2663; OFFICIAL RECORDS BOOK 3970, PAGE 583 AND FINAL JUDGEMENT QUIETING TITLE RECORDED IN OFFICIAL RECORDS BOOK 2653, PAGE 155; LESS AND EXCEPT ANY PORTION DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 67, PAGE 628.

### ALSO KNOWN AS:

A PARCEL OF LAND BEING A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE WEST 1/4 CORNER OF SAID SECTION 17; THENCE SOUTH 01°20'45" WEST, ALONG THE WEST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, A DISTANCE OF 1817.14 FEET TO A POINT ON THE WESTERLY EXTENSION OF THE NORTH LINE OF THE PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 76, PAGE 31 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE SOUTH 88°46'21" EAST, A DISTANCE OF 45.01 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HARTMAN ROAD, SAID POINT ALSO BEING THE NORTHWEST CORNER OF SAID PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN; THENCE CONTINUE SOUTH 88°46'21" EAST, ALONG THE NORTH LINE OF SAID PLAT AND EASTERLY EXTENSION THEREOF, A DISTANCE OF 394.68 FEET; THENCE NORTH 04°04'55" WEST, A DISTANCE OF 255.64 FEET TO A POINT THAT IS 245 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17; THENCE SOUTH 89°46'21" WEST, ALONG SAID LINE, A DISTANCE OF 200.50 FEET; THENCE SOUTH 01°20'40" EAST, A DISTANCE OF 14.91 FEET; THENCE SOUTH 88°46'21" WEST, A DISTANCE OF 169.98 FEET TO A POINT ON SAID EAST RIGHT OF WAY LINE OF HARTMAN ROAD; THENCE SOUTH 01°20'45" WEST, ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 240.25 FEET TO THE POINT OF BEGINNING.

### CERTIFICATIONS:

1. CD ADKINS INVESTMENTS, LLC, a Florida limited liability company
2. EDWARD W. BECHT, P.A.
3. ST. LUCIE TITLE SERVICES, INC.
4. COMMONWEALTH LAND TITLE INSURANCE COMPANY

### SURVEYOR'S NOTES:

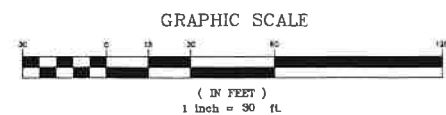
1. NO ATTEMPT WAS MADE BY THIS FIRM TO LOCATE UNDERGROUND UTILITIES OR/ADJACENT TO THIS SITE. THE APPROXIMATE LOCATION OF ALL UTILITIES SHOWN HEREON WERE TAKEN FROM AS-BUILT DRAWINGS AND/OR ON-SITE LOCATION AND SHOULD BE VERIFIED BEFORE CONSTRUCTION.
2. NO ATTEMPT WAS MADE BY THIS FIRM TO LOCATE UNDERGROUND FOOTINGS OF BUILDINGS OR FENCES ON OR ADJACENT TO THIS SITE.
3. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR EASEMENTS AND/OR RIGHTS OF WAY OF RECORD EXCEPT AS SHOWN ON THE RECORD PLAT IF ANY.
4. THE BEARING BASE OF THIS SURVEY IS ALONG THE WEST LINE OF SECTION 17-35-40, SD1°20'45" W, BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE, 8390 ADJUSTMENT.
5. LEGAL DESCRIPTION FURNISHED BY CLIENT.
6. ALL BEARINGS AND DISTANCES SHOWN ARE PLAT AND MEASURED UNLESS OTHERWISE NOTED.
7. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
8. THIS SITE LIES IN FLOOD ZONE 'X' AS SCALED AND INTERPOLATED ON FEMA MAP NO. 1211C-0186-J, DATED FEBRUARY 16, 2012.
9. OWNERSHIP OF FENCE AS SHOWN, IF ANY, ARE NOT DETERMINED BY THIS SURVEY.
10. SITE AREA: 95048.30 SQUARE FEET.

### SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS SURVEY MAP AND/OR REPORT WAS PREPARED UNDER MY RESPONSIBLE CHARGE AND MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 4417, FLORIDA ADMINISTRATIVE CODE AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

CRAIG D. WATSON  
PROFESSIONAL SURVEYOR & MAPPER  
NO. 9647 STATE OF FLORIDA

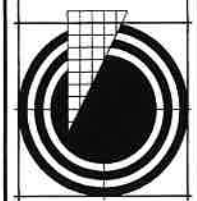
- LEGEND:**  
 F.D.O.T. = FLORIDA DEPARTMENT OF TRANSPORTATION  
 PRM = PERMANENT REFERENCE MONUMENT  
 PSM = PROFESSIONAL SURVEYOR AND MAPPER  
 ORB = OFFICIAL RECORDS BOOK  
 PG = PAGE  
 LB = LICENSED BUSINESS  
 ID = IDENTIFICATION  
 CONC. = CONCRETE  
 CBS = CONCRETE BLOCK STRUCTURE  
 CMP = CORRUGATED METAL PIPE  
 WPP = WOOD POWER POLE  
 -U- = OVERHEAD UTILITIES  
 DB = DEED BOOK



DATE	
REVISIONS	
CHK	

PREPARED FOR:  
**CD ADKINS INVESTMENTS, LLC**  
 2006 HARTMAN ROAD  
 FORT PIERCE, FLORIDA

**WATSON | KILLANE**  
 SURVEYING AND MAPPING, INC.  
 2240 NE DIXIE HIGHWAY  
 JENSEN BEACH, FLORIDA 34957  
 PHONE 772-334-0868  
 WATSONKILLANE@GMAIL.COM  
 LICENSED BUSINESS NO. 8241



JOB NUMBER	18-156
FIELD DATE	3-28-2018
CHECKED BY	CDW
DRAWN BY	DPK
SCALE	1" = 30'
<b>SHEET</b>	<b>1 OF 1</b>



Treasure Coast General Contractors, LLC  
1720 Copenhaver Rd  
Fort Pierce, FL 34945  
[treasurecoastgc@gmail.com](mailto:treasurecoastgc@gmail.com)  
License# CGC1526542

## Traffic Statement

### To Whom It May Concern:

The property is located at 2006 Hartman Rd and the proposed site plan is for a new office/shop for Treasure Coast General Contractors, LLC. The proposed shop on the east side of the property will be used for storage purposes only and will not have offices/parking of any kind. The proposed office on the west side(Road Front) is not open to the public and will be by appt only if needed for a new client meeting. For office purposes we should not have more than 4-6 people in this office at any given time. We will have (1) receptionist and 4-5 office employees maximum.

Sincerely,

Devin Wheaton  
Owner

Prepared by and return to:  
**Brian T. Anderson, Esq.**  
**Attorney at Law**  
**Becht Anderson LLP**  
**321 S. 2nd Street**  
**Fort Pierce, FL 34950**  
**772-465-5500**  
File Number: **AdkinsWheaton**  
Will Call No.:

[Space Above This Line For Recording Data]

## Warranty Deed

**This Warranty Deed** made this **10th** day of **December, 2021** between **CD Adkins Investments, LLC, a Florida limited liability company** whose post office address is **9821 Orange Avenue, Fort Pierce, FL 34945**, grantor, and **Wheaton Holdings LLC, a Florida limited liability company** whose post office address is **1720 Copenhaver Rd, Fort Pierce, FL 34945**, grantee:

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

**Witnesseth**, that said grantor, for and in consideration of the sum of **TEN AND NO/100 DOLLARS (\$10.00)** and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Saint Lucie County, Florida** to-wit:

**A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST AND DESCRIBED IN DEEDS RECORDED IN OFFICIAL RECORDS BOOK 1424, PAGE 1356; OFFICIAL RECORDS BOOK 1428, PAGE 1778; OFFICIAL RECORDS BOOK 1481, PAGE 728; OFFICIAL RECORDS BOOK 1777, PAGE 17; OFFICIAL RECORDS BOOK 2887, PAGE 317; OFFICIAL RECORDS BOOK 3548, PAGE 2971; RE-RECORDED IN OFFICIAL RECORDS BOOK 3567, PAGE 2663; OFFICIAL RECORDS BOOK 3970, PAGE 593 AND FINAL JUDGMENT QUIETING TITLE RECORDED IN OFFICIAL RECORDS BOOK 2853, PAGE 155; LESS AND EXCEPT ANY PORT/ON DESCRIBED IN SPECIAL WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 67, PAGE 628.**

**ALSO KNOWN AS:**

**A PARCEL OF LAND BEING A PORTION OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE WEST 1/4 CORNER OF SAID SECTION 17; THENCE SOUTH 01° 20' 45" WEST, ALONG THE WEST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17, A DISTANCE OF 1817.14 FEET TO A POINT ON THE WESTERLY EXTENSION OF THE NORTH LINE OF THE PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 76, PAGE 31, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE SOUTH 89° 46' 21" EAST, A DISTANCE OF 45.01 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HARTMAN ROAD, SAID POINT ALSO BEING THE NORTHWEST CORNER OF SAID PLAT OF DOLLAR TREE AT OKEECHOBEE AND HARTMAN,; THENCE CONTINUE SOUTH 89° 46' 21" EAST, ALONG THE NORTH LINE OF SAID PLAT AND EASTERLY EXTENSION THEREOF, A DISTANCE OF 394.68 FEET; THENCE NORTH 04° 04' 55" WEST; A DISTANCE OF 255.64 FEET TO A POINT THAT IS 245 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 17; THENCE SOUTH 89° 46' 21" WEST, ALONG SAID LINE, A DISTANCE OF 200.50 FEET;**

THENCE SOUTH 01° 20' 40" EAST, A DISTANCE OF 14.91 FEET; THENCE SOUTH 89° 46' 21" WEST, A DISTANCE OF 169.98 FEET TO A POINT ON SAID EAST RIGHT OF WAY LINE OF HARTMAN ROAD; THENCE SOUTH 01° 20' 45 WEST, ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 240.25 FEET TO THE POINT OF BEGINNING

Parcel Identification Number: 2417-332-0005-000-1 / 2417-332-0006-000-8

Together with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2021.

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Ed Dacht  
Witness Name: Ed Dacht

Brian T. Anderson  
Witness Name: Brian T. Anderson

CD Adkins Investments, LLC  
By: Cheryl C. Adkins  
Cheryl C. Adkins, Managing Member

State of Florida  
County of Saint Lucie

The foregoing instrument was acknowledged before me by means of [X] physical presence or [ ] online notarization, this 10th day of December, 2021 by Cheryl C. Adkins, Managing Member of CD Adkins Investments, LLC, on behalf of the company, who [ ] is personally known to me or [X] has produced a driver's license as identification.

[Notary Seal]



BRIAN T. ANDERSON  
Commission # HH 125352  
Expires May 3, 2025  
Bonded Thru Budget Notary Services

Brian T. Anderson  
Notary Public, State of Florida

Printed Name: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_