Central Florida Testing Laboratories, Inc.
Testing, Development and Research
12625 - 40th Street North Clearwater, Florida 33762
ENGINEERING BUSINESS NO. 1066 GEOLOGY BUSINESS NO. 224
TAMPA BAY AREA (727) 572-9797 FLORIDA 1-800-248-CFTL FAX (727) 299-0023

Alvarez Residence
Backus Road & West Lake Road, Palm Harbor
Parcel: 07-28-16-00000-110-0700
Pinellas County, Florida
Geotechnical Services
July/August 2023

Report Number. 245375

Prepared
for

Ms. Jessica Alvarez
EZ Choice Realty
1175 San Carlos Avenue NE
St. Petersburg, Florida 33702

Central Florida Testing Laboratories, Inc.

Testing Development and Research

12625 – 40TH STREET NORTH • CLEARWATER, FL 33762

ENGINEERING BUSINESS NO. 1066 GEOLOGY BUSINESS NO. 224

TAMPA BAY AREA (727) 572-9797 FLORIDA 1-800-248-CFTL FAX (727) 299-0023

July 6, 2023

Ms. Jessica Alvarez
EZ Choice Realty
1175 San Carlos Avenue NE
St. Petersburg, FL 33702

Re: Geotechnical Investigation for Proposed New Alvarez Residence
Backus Road & West Lake Road Property, Palm Harbor, Florida 34684
(Parcel: 07-28-16-00000-110-0700, Pinellas County, Florida)
CFTL Report No. 245375

Dear Ms. Alvarez,

As authorized, our office has conducted a subsurface soils investigation for your planned new residence. This investigation consisted of three standard penetration test (SPT) borings positioned with two borings within the designated building envelope for the new home and one SPT boring within the building envelope of the detached garage. The building envelopes were previously designated by corner stakes and tape in the field. The approximate locations of all three borings are shown on the updated Survey provided our office.

Site Description

The subject property consists of approximately 2 acres of vacant land located at the southeast corner of the intersection of Backus Road and West Lake Road (CR 537) in the unincorporated area of Palm Harbor, Pinellas County, Florida. The property is presently covered with brush and trees with the brush having been mulched down to allow access for our drilling equipment in the areas planned for the new house and detached garage. The property is bordered by the Rustic Oaks subdivision to the north, the Meadow Lake Apartment complex to the west, the Somerset Woods subdivision to the south and a single family home to the east.

The north and west sides of the property are considered buildable upland areas and each slopes down toward the southeast portion of the property which contains a wetland at a significantly lower elevation.

For additional reference regarding the subject property, we have also included an area map showing the site location with respect to the surrounding geographical area, large and small scale aerial photographs of the property, and a current National Flood Hazard Layer Map showing the FEMA Flood Zoning designation for the property. Based on the FEMA zoning the property and the surrounding area are designated as being within a "X" Flood Zone. To our knowledge "X" zoning does not require use of a special foundation unless dictated by soil conditions nor does it require a minimum finished floor elevation for the first living floor level of the home. However, we recommend that the building requirements for the property be confirmed by the Pinellas County Building Department or applicable municipality that has jurisdiction over construction on the site.

Purpose

With "X" flood zoning in affect, the purpose of the borings is to provide general engineering properties of the soils beneath the new home and detached garage areas and allow us to make recommendations as to foundation types and their compatibility with the existing soils.

Test Methods

The borings were completed using sampling intervals in excess of those required by ASTM Specifications, D-1586, describing the Standard Penetration Test or "split-spoon" method of sampling. Four samples were taken in the upper ten feet to provide greater definition within this zone.

The penetration resistance testing and sample taking was accomplished with the use of a 2" O.D. sampler seated six inches into the bottom of the borehole and advanced an additional one foot under the effort of a 140 pound hammer falling freely thirty inches. The number of blows required of the hammer to advance the sampler one foot into undisturbed material was noted as the blow count (N) of that particular stratum. Portions of each soil sample so taken, were classified, sealed in moisture-proof containers and returned to our laboratories for verification of field classification.

The borings were advanced using a truck mounted drill rig utilizing a recirculating bentonite drill fluid to maintain the borehole in noncohesive soils and to remove cuttings created by the drill bit. Upon completion the boreholes were sealed in accordance with SWFWMD regulations.

Boring Results

The profile of each of the three borings will be discussed separately.

Boring B-1, positioned in the southwest portion of the building envelope for the home, encountered soils composed of a surficial layer of loose sands and silty sands that contained minor roots and some organics. A Loss on Ignition test of this soil recorded 6.1% organics by weight. Organic contents over 5% by weight are considered suspect in providing long term support for shallow foundations that bear in or above the layer. Beginning at approximately 3 feet and below the marginally organic layer of loose silty sands were medium dense sands that continued to approximately 15 feet below the surface where another zone of loose clayey sands were encountered. This second zone of loose soils extended to approximately 20 feet and were followed by a well-defined confining layer of stiff to very stiff sandy clays that continued to the termination depth of the boring, 35 feet below the surface. No loss of drilling fluid circulation occurred during drilling of boring B-1 and the shallow ground water table was measured at 3 feet below the surface in a hand auger boring conducted adjacent to the SPT borehole.

Boring B-2, positioned in the northeast portion of the building envelope for the home, encountered soils composed of approximately 5 feet of loose sands that contained an low level organic layer between 3 and 5 feet. The organic content of this layer was recorded at 3.4% by weight when tested by the Loss on Ignition test method. Beginning at 5 feet and continuing to approximately 20 feet were medium dense followed by slightly loose sands to 25 feet and slightly loose silty sands to 30 feet. Between 30 and 35 feet were dense sands that covered the beginning of a layer of very stiff sandy clay that terminated the boring with the 35-foot sampling interval. Similar to boring B-1 no loss of drilling fluid circulation occurred during advancement of boring B-2 and the shallow water table was measured at 5 feet below the surface in a hand auger boring conducted adjacent to the SPT borehole.

Boring B-3, positioned in the area planned to contain the detached garage,

encountered soils composed of approximately 5 feet of loose sandy soils, absent of the previously identified organic layer, followed by medium dense sands to 19 feet. Beginning at approximately 19 feet and continuing to 25 feet were very loose silty sands followed by slightly loose grading to medium dense clayey sands to 34 feet where very stiff sandy clays began and terminated the boring with the 35-foot sampling interval. No loss of drilling fluid circulation occurred during drilling of the boring and the shallow water table was measured at 4.2 feet below the surface in a hand auger boring conducted adjacent to the SPT borehole.

Conclusions

Based on the soil profiles defined by the three borings, two constraints to shallow foundations exist within the soils. The first is the marginally organic soil layer found beneath the buildable area planned for the new home but not beneath the area planned for the detached garage, while the second is the generally loose condition of the upper sandy soils found beneath both the new home area and the detached garage area. In our opinion, however both constraints can be addressed from the surface to improve soil conditions in order to provide long term support for shallow spread footer foundations designed for a soil bearing capacity of 2,000 pounds per square foot.

Upon successful completion of the soil improvement recommendations, the use of this safe veering capacity will result in an estimated differential settlement not exceeding ½ inch in 50 linear feet of continuous strip footing and an estimated total settlement not exceeding 1 inch across all foundations.

Recommendations

The recommendations to address the organic laden soil stratum are as follows:

- Stake or designate the specific footprint of the house and the footprint of the detached garage in the field. Add a 5-foot perimeter buffer strip to each footprint.

- After stripping of surface vegetation and any tree removal within the new building envelopes plus the 5-foot perimeter buffer strip, the marginally organic soils should be removed by excavation and replaced with clean, dry sandy soil having a classification of either SP or SP/SM when classified by the Unified Soil Classification System. We suggest that the excavation work begin with the footprint nearest to the location of boring B-1, which had the highest recorded organic content.

- Once encountered the organic laden soil layer should be followed or "chased: within the designated area and removed in its entirety. This can be done all at once or in sections depending upon site conditions. Due to the organic layer potentially extending beneath the static water table, either dewatering should be used to lower the water table to a depth below the bottom of the deepest portion of the stratum or that excavation and backfilling be done in small sections in a manner that allows for a dry excavation bottom to be observed before the start of backfilling.

- We recommend that the above process be observed by an Engineering

Technician representing this Geotechnical Engineer. The on-site Engineering Technician can assist in determining if the excavation is deep enough or when to laterally stop removing soil. Additionally, the Engineering Technician can conduct density testing on each lift of replacement soil as it becomes ready for testing.

- Since it is visually very difficult to differentiate between 6% organics and 3% organics, the stratum or layer once encountered should be removed from beneath all areas of the new home footprint plus buffer strip under which it exists.

- The replacement or backfill soil should be placed in lifts not exceeding 12 inches (1 foot) in depth and rolled or compacted to a density of at least 95% of Modified Proctor established maximum dry soil density to return the excavated area to approximately the elevation of the surrounding land.

The recommendation to address the upper loose sandy soils are as follows:

- Most or a good portion of the soil beneath the new house footprint will come under the above guidelines and should be already compacted to sufficient density.

- If, however, unexcavated areas of the new home footprint remain unexcavated, then once the building envelop is brought back to surround grade, the entire pad should be proof-rolled to improve the density of any remaining loose near surface soils. This densification process may be accomplished by surface applied proof-rolling in two perpendicular directions across the new building envelops plus the perimeter buffer strip.

- The buffer strip is to insure that the roller/compactor travels over and across perimeter foundation lines and does not stop short of the perimeter foundations which will carry the heaviest loads of the new home.

- This densification program can be accomplished by either static or vibratory rolling. With no other structures in close proximity to either building pad, we recommend that vibratory rolling be utilized with a steel drum roller weighing at least 10 tons dead weight and capable of exerting at least 35,000 ft.-lbs. of energy to the contact soils. Static rolling only should be utilized if any nearby structures are detrimentally effected by the vibratory rolling process. Using static rolling will require more passes of the roller than will vibratory rolling to achieve the target density; however, no detrimental vibrations should be generated with a static rolling process.

- Sufficient final proof-rolling should result in an increase in density of the upper 5 feet of the soil profile across the new building envelop to a uniform condition represented by a minimum conventional density of 95% of Modified Proctor established maximum dry soil density or by a hand cone penetrometer resistance of at least 40 kg/cm2. Hand cone penetrometer (HCP) testing can be used to verify the increase in density for the soils between 2 and 5 feet. Using this approach will eliminate the

need for excavation and backfilling of deep test pits or experiencing conflicts with the water table.

- Completion of the above improvements will result in a safe soil bearing capacity of 2,000 psf for use in the design of shallow foundations.

Above Ground Fill Soils

For any additional fill soil placed above the proof-rolled grade and within the building pad areas to raise their elevation or placed beneath other soil supported elements of the new construction, we recommend this fill soil also conform to the following general fill specification:

This fill should consist of clean, noncohesive sandy soils meeting either SP or SP/SM soil classification by the Unified Soil Classification System. Fill should be placed in lifts not exceeding one foot in depth and compacted to a minimum density of at least ninety-five percent (95%) of the soils maximum dry density as established by the Modified Proctor Test, ASTM D-1557. Each lift should achieve satisfactory density results prior to placement and compaction of subsequent lifts to eliminate the possibility of dense soil bridging over loose insufficiently compacted soils.

Our office is available to conduct any testing or inspections to verify the results of the above recommendations.

Limitations

This investigation and report deals only with the soil zones and strata located within the area represented from the ground surface to the termination depth of the borings.

It is not intended to predict or accept responsibility for sinkhole development. Other means of subsurface investigations including, but not limited to, deep structural borings, rock coring, geophysical studies, ground penetrating radar or resistivity surveys are used for sinkhole potential determinations and are out of the scope of this investigation.

Generally accepted soil mechanics and foundation engineering practices were utilized in the preparation of this report; and no other warranty, either expressed or implied is made as to the recommendations provided.

This report is for the exclusive use of our client and may not contain sufficient information for other uses, such as quantity take-offs, or for interpretation by other parties for bidding purposes. In the event conclusions and/or recommendations based on our data are made by others, such conclusions and/or recommendations are not our responsibility unless we have been given an opportunity to review and concur with them.

If borings were not staked by a registered land surveyor but were located by our drill crews, the following method was used:

Distances are generally measured using a 100-foot tape measure with right angle

approximation used to turn corners. Scaling from prints or surveys with reference points shown on the plan or geographical references will produce a degree of accuracy that is typically +/- 5% for length and +/- 10 degrees for angles.

Soil strata delineations are estimated in the field by color changes, texture differences and penetration resistance values. These may be more gradual transitions than those shown on the boring log representations of strata delineations.

The ground water depth determination shown at the bottom of the boring logs was measured in the bore hole at the time of drilling, unless noted otherwise. This depth does not reflect seasonal high water levels and would fluctuate as expected with variations in rainfall or other factors not present at the time of our soils investigation.

The boring data represents only that data obtained during this investigation at the approximate locations shown on the site schematic or plan.

Should significant variations of soil or subsurface conditions exist between boring locations and be encountered by future exploratory work or site preparation efforts, our office should be notified so that supplemental borings or data gathering determinations can be made to update our report and recommendations at a minimal expense to our client.

It is the responsibility of our client to inform our office of these variations if possible modifications of the report is warranted.

This report is general in nature, unless specific geotechnical data or recommendations were asked to be addressed. However, we would be pleased to answer any questions concerning comments or recommendations made in this report.

We appreciate the opportunity to have been of service. If any further evaluation of the site or testing services are needed, either prior to or during construction, please do not hesitate to contact our office.

Sincerely,

CENTRAL FLORIDA TESTING LABORATORIES, INC.

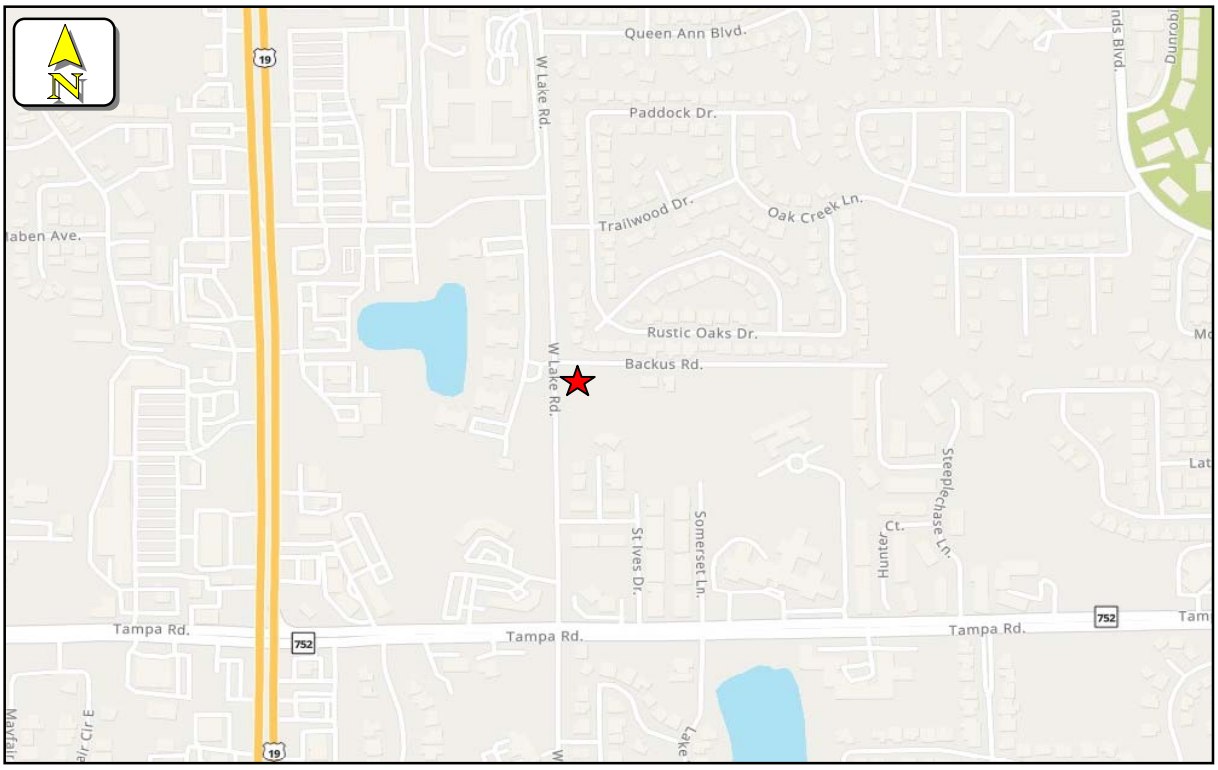
This item has been electronically signed and sealed by George C. Sinn, Jr., P.E. using a digital signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

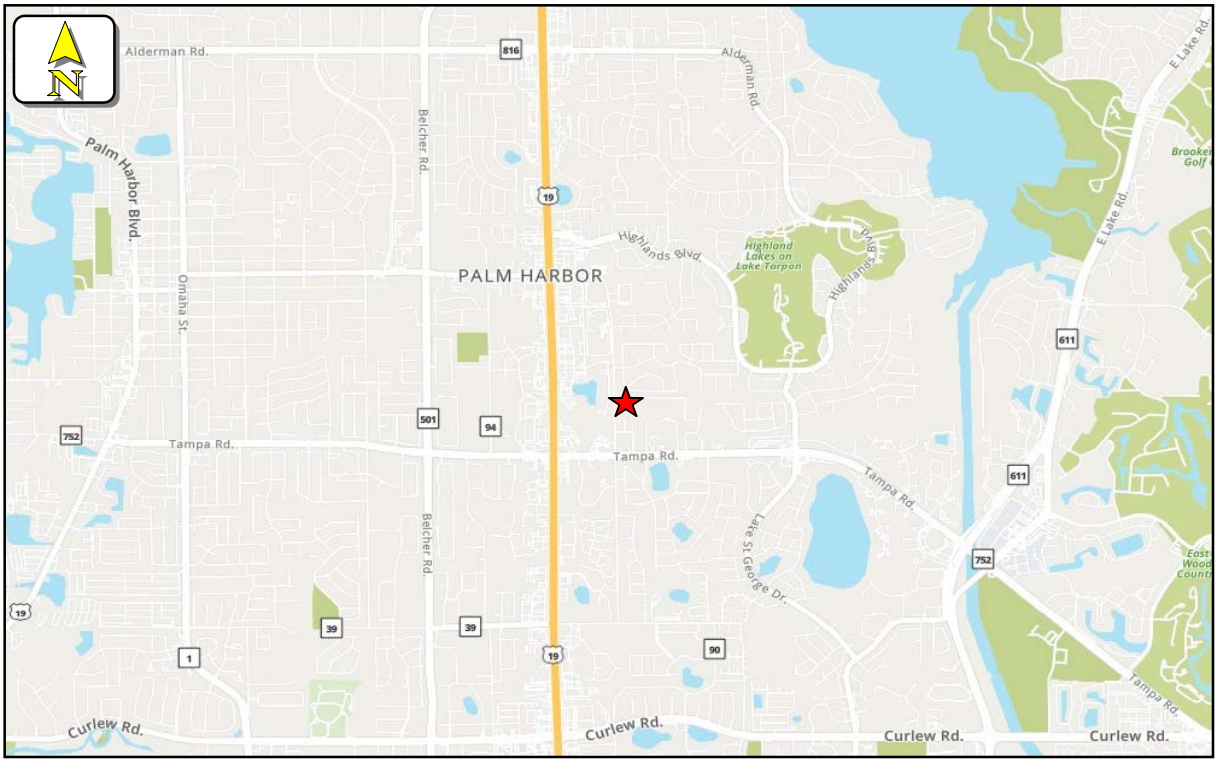
Digitally signed by: George C Sinn, Jr.
Date: 2023.07.07 14:56:31 -04'00'

George C. Sinn, Jr., P.E.
President/Principal Engineer
FLN 16911
GCS/gs
Attachments

Maps

Various



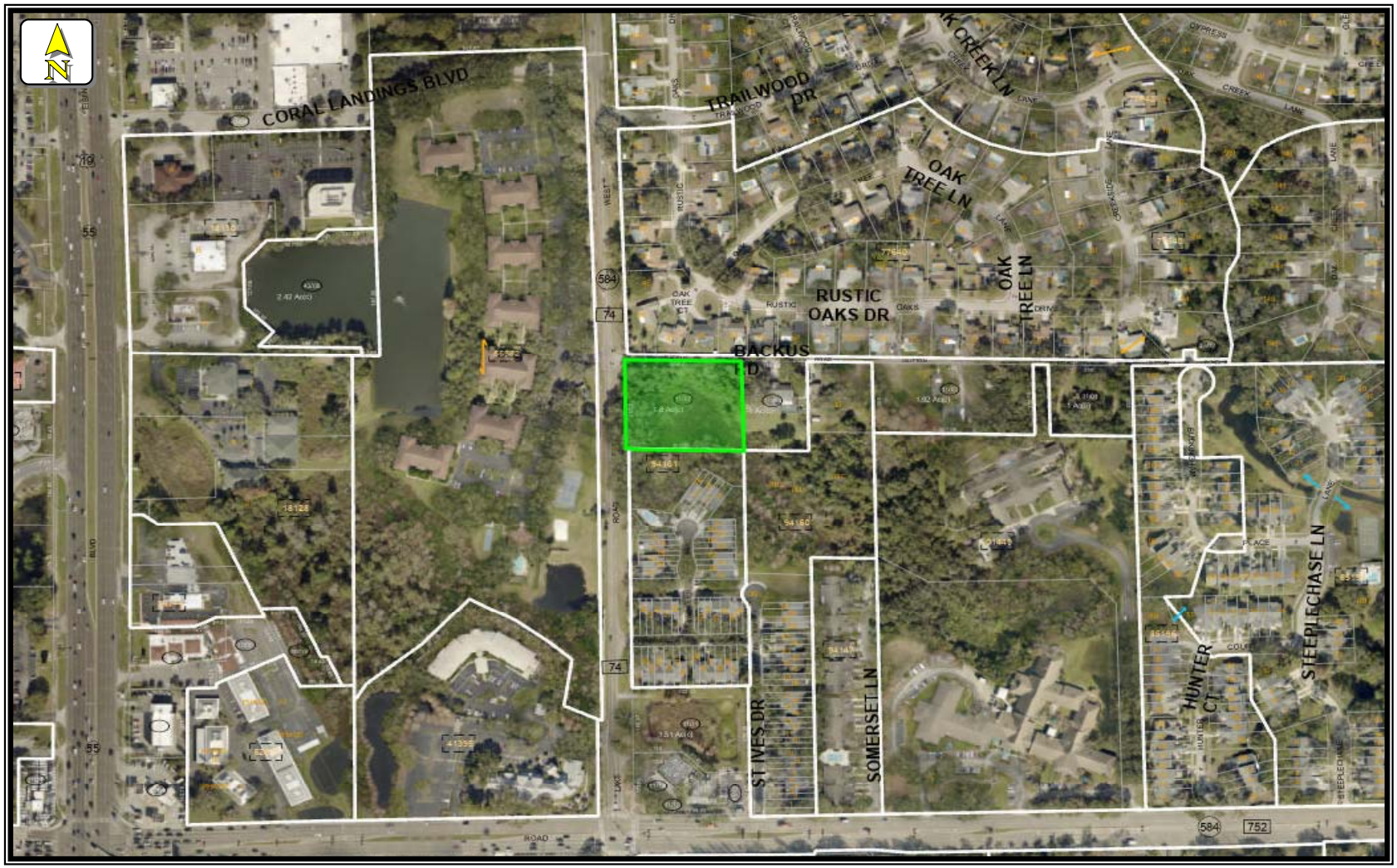


Central Florida Testing Laboratories, Inc.

Alvarez Residence
Backus Road & West Lake Road
Palm Harbor, Florida 34684
Report No: 245375

Legend			Figure 1 - Location
Subject Property	Interstate	Water	
Population Center	Toll Highway	Intermittent Lake	
Land	US Highway	Wetland	
Sand	State Route	River/Canal	
Woodlands	Local Road	Intermittent River	
Park	Major Connector	Railroad	

2022 County Aerial Photograph of Site

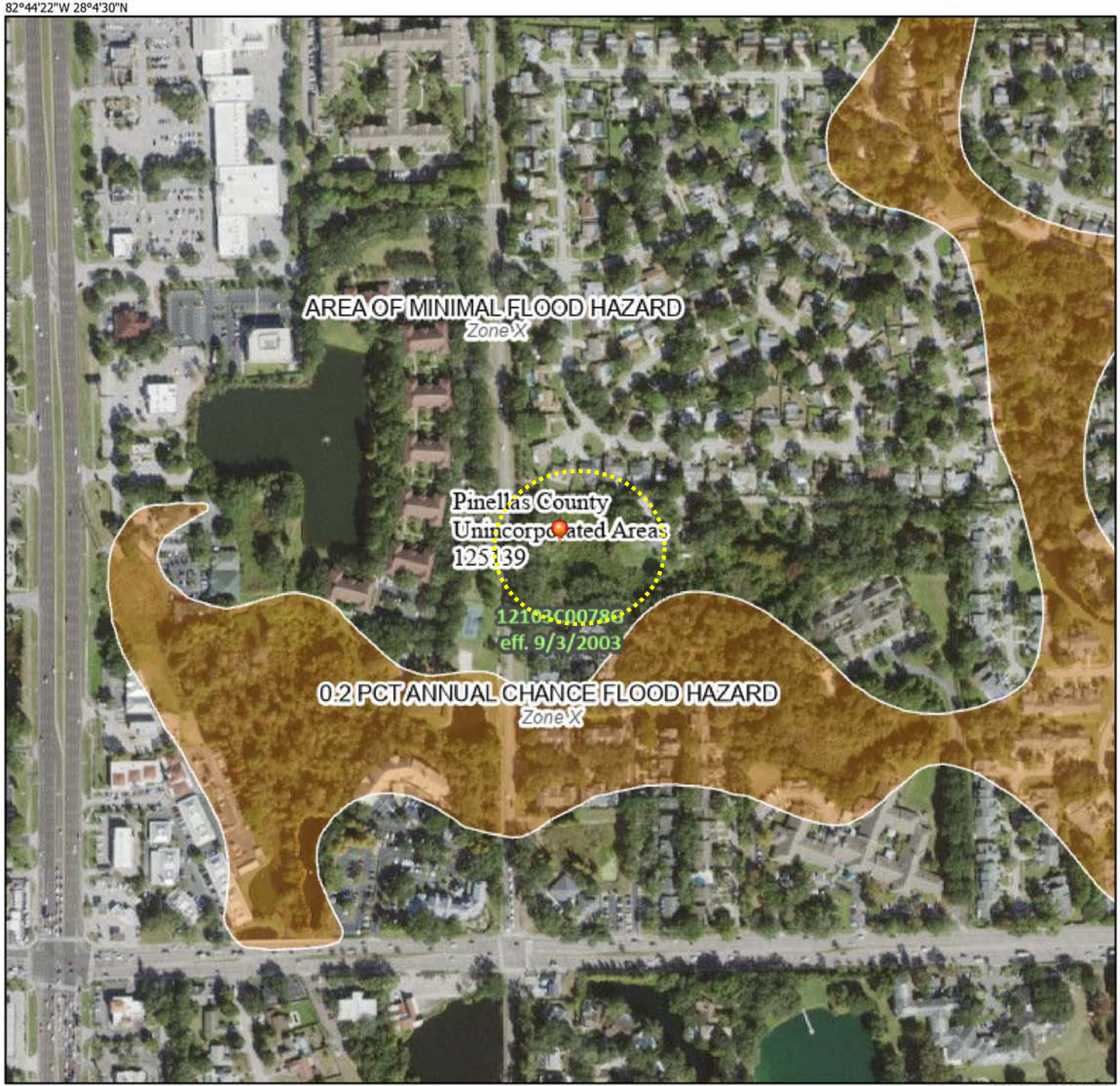


2022 County Aerial Photograph of Site

National Flood Hazard Layer FIRMette

FEMA

82°44'22"W 28°4'30"N



82°43'44"W 28°3'58"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

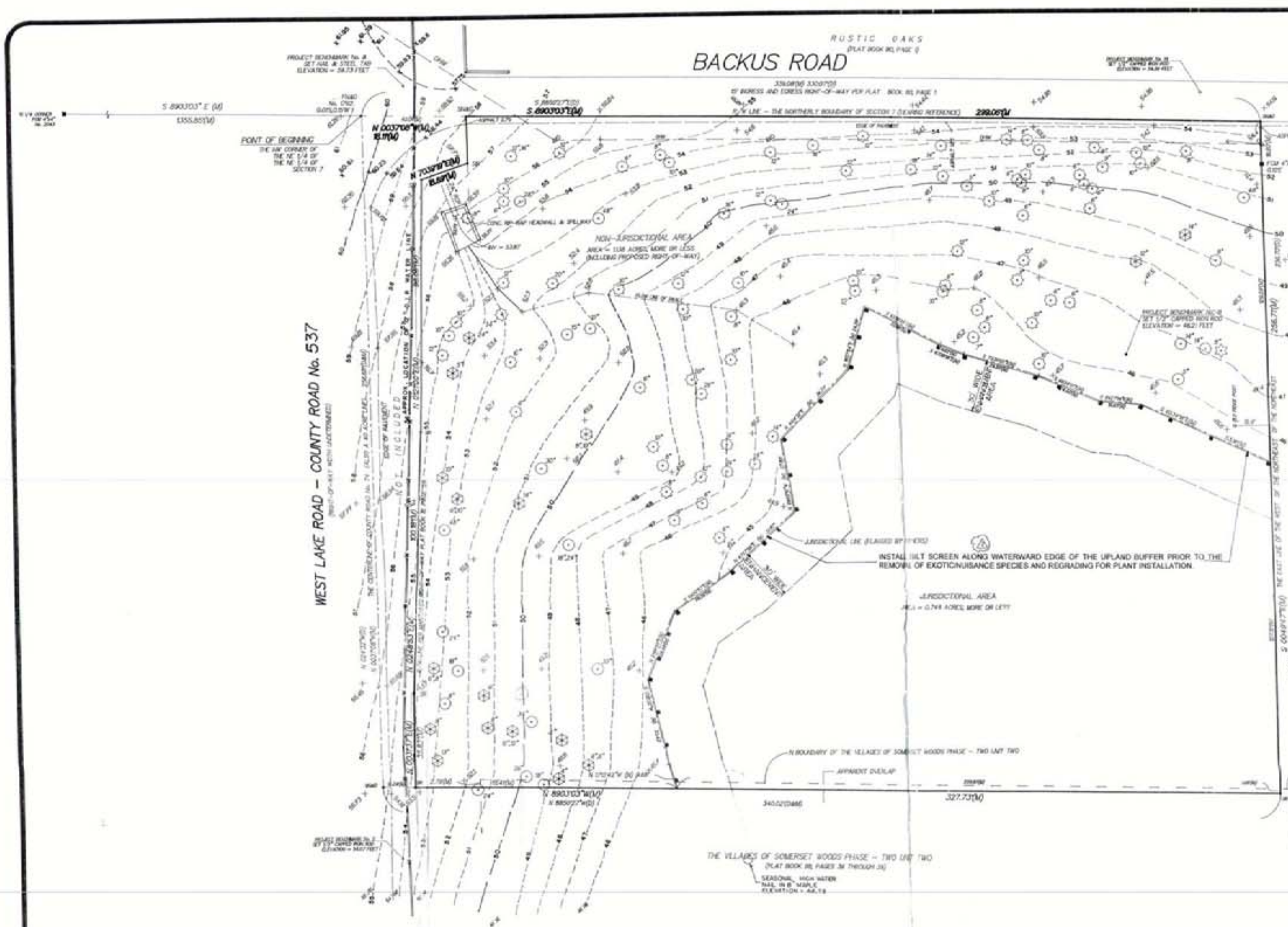
N

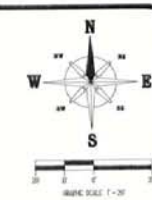
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/19/2023 at 2:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





NOTES

1. A TEMPORARY IRRIGATION SYSTEM WILL BE PROVIDED IN THE UPLAND BUFFER.
2. PLANT MATERIAL INSTALLED IN THE BUFFER WILL BE HAND WATERED UNTIL ESTABLISHMENT HAS OCCURRED.
3. THE REMOVAL OF EXOTIC NUISANCE SPECIES ALONG WITH THE RESTORATION OF THE UPLAND BUFFER AND ON SITE WETLANDS, AS APPROVED, MUST BE COMPLETED PRIOR TO THE RELEASE OF ANY CERTIFICATE OF OCCUPANCY ASSOCIATED WITH THIS PROJECT.

NOTE: MONITORING AND MAINTENANCE OF THE UPLAND BUFFER AND WETLAND ENHANCEMENT AREA WILL BE MONITORING EVENT 6-MONTHS AFTER PLANTING AND AT THE END OF THE 1-YEAR MAINTENANCE AGREEMENT.

UPLAND BUFFER AREA PLANTING SCHEDULE

SPECIES	COMMON NAME	O.C.	SIZE	NUMBER
Taxodium Distichum	Bald Cypress	Variable	1.5" 6'	18
Juniperus Silicicola	Eastern Red Cedar	Variable	1.5" 6'	4
Spartina Bakerii	Smooth Cordgrass	3'	BR	250
Muhlenbergia Capillaris	Muhley Grass	3'	BR	250
Illicium Parviflorum	Yellow Anise	3'	1-Gallon	100
Gelsemium Sempervirens	Carolina Yellow Jasmine	3'	1-Gallon	50
Psychotria Nervosa	Wild Coffee	3'	1-Gallon	50
Glandularia Tampensis	Tampa Verbena	3'	1-Gallon	50
TOTAL:				770

WETLAND ENHANCEMENT AREA PLANTING SCHEDULE

SPECIES	COMMON NAME	O.C.	SIZE	NUMBER
Spartina Bakerii	Smooth Cordgrass	3'	BR	160
Iris Virginica	Blue Flag Iris	3'	BR	160
Canna Flaccida	Golden Canna	3'	BR	260
Pontederia Cordata	Pickerelweed	3'	BR	360
Sagittaria Lancifolia	Arrowhead	3'	BR	360
TOTAL:				1,300

NOTES: BR = Bare Root; 1-Gallon is equivalent to root ball size; Planting Centers are 3' for herbaceous

2002 SURVEY OF PROPERTY

TREE LEGEND
- = BAY
- = CAMPHOR
- = OAK
- = SPECIES UNKNOWN

LEGEND AND ABBREVIATIONS:
℄ = CENTERLINE, FIR = FOUND IRON ROD, = POWER POLE, TWP = TOWNSHIP, RNG = RANGE,
C/S = CONCRETE SLAB, (M) = MEASURED DIMENSION, (D) = DIMENSION PER DEED, INV = INVERT ELEVATION,
PCP = PERMANENT CONTROL POINT, A/C = AIR CONDITIONER, SN&D = SET NAIL & DISK No. LB4019,
R/W = RIGHT OF WAY, N = NORTH, S = SOUTH, E = EAST, W = WEST, FN&D = FOUND NAIL & DISK,
CONC. = CONCRETE, SIR = SET 1/2" IRON ROD No. 4086, C.B. = CHORD BEARING, = GUY ANCHOR,
W/C = WITNESS CORNER, PRM = PERMANENT REFERENCE MONUMENT, LFE = LOWEST FLOOR ELEVATION,
X0.00 = EXISTING ELEVATION, LB = LICENSED BUSINESS, OHW = OVERHEAD WIRE, RCP = REINFORCED CONCRETE PIPE
= SILT SCREEN PER F.D.O.T. INDEX No. 102

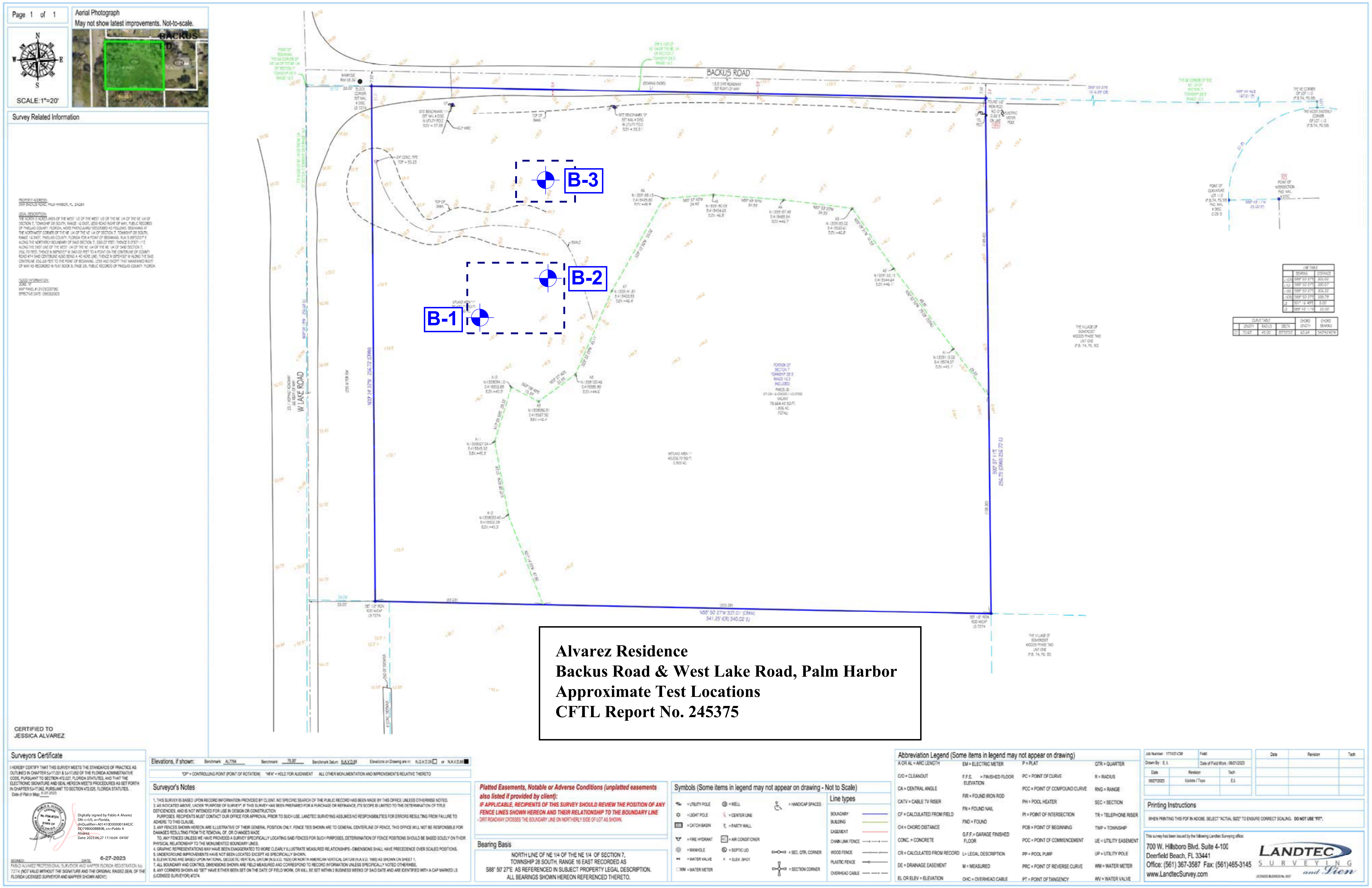
PROJECT TITLE: NATURE'S WINDOW TOWNHOMES
PREPARED FOR: JOSEPH E. YASSO, RE/MAX REALTEC GROUP, 4175 WOODLAND PARKWAY, PALM HARBOR, FL. 34685, TEL. 789 – 5555

DRAWING: EXISTING CONDITIONS PLAN

REVISIONS: 10-5-03 PER PINELLAS COUNTY; 11-13-03 PER COUNTY

SCALE	DRAWN BY	SHEET No.
1" = 20'	M.RYDER	2 of 15 SHEETS
DATE: 9-13-02	JOB No. 1170-02	

ALEX J PANIK P.E., P.L.S., P.A. CONSULTING ENGINEER
TELEPHONE (727) 934-5120
39216 U.S. HIGHWAY NORTH 19, TARPON SPRINGS, FLORIDA 34689



Alvarez Residence
Backus Road & West Lake Road, Palm Harbor
Approximate Test Locations
CFTL Report No. 245375

SPT Boring Results

Client: Ms. Jessica Alvarez
Project: Alvarez Residence
Location: Backus Road
City / State: Palm Harbor, Florida

Report No: 245375
Log of Borehole: B-1
Date Drilled: 6/27/2023

ENGINEERING BUSINESS NO. 1066 GEOLOGY BUSINESS NO. 224

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Lab/ Notes
0		Ground Surface				
		Sand Gray, fine grained.	loose	2-2-3	5	6.1% organic
		Silty Sand Very dark grayish brown, fine grained, minor roots, some organics.	medium dense	2-4-7	11	
5		***Sand*** Dark grayish brown, fine grained.	medium dense	7-12-14	26	
			medium dense	8-11-11	22	
10		***Sand*** Light gray, fine grained.	medium dense	8-7-8	15	
15			loose	4-3-2	5	
		Clayey Sand Greenish gray, fine grained.				
20			stiff	4-4-6	10	
25			very stiff	6-7-12	19	
		Sandy Clay Light greenish gray, minor brown mottling at 25' to 35'.				
30			very stiff	12-11-16	27	
35			very stiff	9-10-9	19	
		End of Boring				
40						

Standard Penetration Test (blows/ft) 0 20 40 60 80 100

Notes: FEMA Flood Zone: X

No loss of drill fluid circulation

Water Table: 3.0' bls (HA)
Ground Elevation: Existing
Drilled by: AC
Compiled by: GL

Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

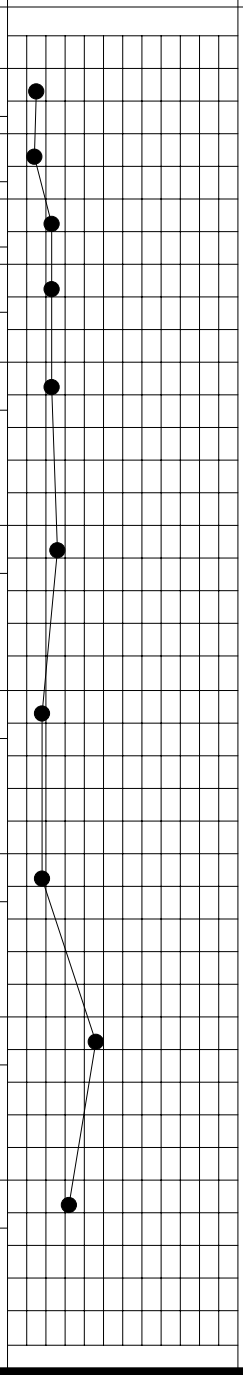
Client: Ms. Jessica Alvarez
Project: Alvarez Residence
Location: Backus Road
City / State: Palm Harbor, Florida

Report No: 245375
Log of Borehole: B-2
Date Drilled: 6/27/2023

ENGINEERING BUSINESS NO. 1066 GEOLOGY BUSINESS NO. 224

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Lab/ Notes
0		Ground Surface				
		Sand Brown to dark grayish brown, fine grained.	loose	2-2-3	5	
		Silty Sand Dark grayish brown to very dark grayish brown, fine grained, minor organics.	loose	2-2-2	4	3.4% organic
5		***Sand*** Dark brown, fine grained, slightly silty.	medium dense	1-7-6	13	
		Sand Dark gray, fine grained, trace small roots.	medium dense	1-6-7	13	
10			medium dense	6-6-7	13	
15		***Sand*** Light gray, fine grained.	medium dense	7-7-9	16	
20			slightly loose	6-4-4	8	
25		***Silty Sand*** Brown, fine grained.	slightly loose	3-3-5	8	
30		***Sand*** Pale brown, fine grained.	dense	11-16-20	36	
35		***Sandy Clay*** Light gray to greenish gray, minor brown mottling.	very stiff	14-11-11	22	
		End of Boring				
40						

Standard Penetration Test (blows/ft) 0 20 40 60 80 100



Notes: FEMA Flood Zone: X

No loss of drill fluid circulation

Water Table: 5.0' bls (HA)
Ground Elevation: Existing
Drilled by: AC
Compiled by: GL

Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

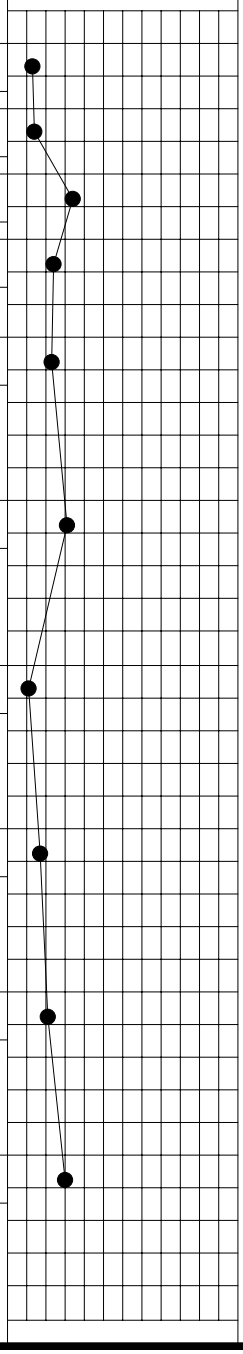
Client: Ms. Jessica Alvarez
Project: Alvarez Residence
Location: Backus Road
City / State: Palm Harbor, Florida

Report No: 245375
Log of Borehole: B-3
Date Drilled: 6/27/2023

ENGINEERING BUSINESS NO. 1066 GEOLOGY BUSINESS NO. 224

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Lab/ Notes
0		Ground Surface				
		Sand Dark grayish brown to grayish brown, fine grained.	very loose	1-1-2	3	
			loose	2-2-2	4	
5			medium dense	7-10-14	24	
			medium dense	6-8-6	14	
10		***Sand*** Light gray to yellowish brown, fine grained.	medium dense	3-6-7	13	
15			medium dense	9-9-12	21	
20		***Silty Sand*** Brown, fine grained.	very loose	1-1/12"	1	
25		***Clayey Sand*** Grayish brown, fine grained, minor sand seams.	slightly loose	2-3-4	7	
30		***Clayey Sand*** Light greenish gray, fine grained.	medium dense	3-5-6	11	
35		***Sandy Clay*** Light greenish gray, fine grained, occasional brown mottling.	very stiff	4-8-12	20	
		End of Boring				
40						

Standard Penetration Test (blows/ft) 0 20 40 60 80 100



Notes: FEMA Flood Zone: X

No loss of drill fluid circulation

Water Table: 4.2' bls (HA)
Ground Elevation: Existing
Drilled by: AC
Compiled by: GL

Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586