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Suncoast Lakes Commercial

Pre-Design Testing of Soils
February 2007

Lab No: 189520

Prepared
For:

Rizk Florida JV
12830 Shady Hills Road
Spring Hill, Florida 34610-8057

Issued to:

Rizk Florida JV

&

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March 2, 2007

Mr. George A. Nicholas
Rizk Florida JV
12830 Shady Hills Road
Spring Hill, Florida 34610-8057

Re: Suncoast Lakes Commercial
Preliminary Geotechnical Investigation
Lab No. 189520

Dear Mr. Nicholas:

As authorized, our office has completed the requested geotechnical services performed in areas of future roadways, parking areas, drainage ponds, mitigation areas, selected out parcels, as well as a proposed Publix Supermarket planned at the above referenced site.

SCOPE OF SERVICES

Our Scope of Services included completing twelve (12) auger borings to a depth of 6 feet at staked locations in the proposed roadways and parking areas, classifying the twelve (12) soil types identified by these borings, recording existing water tables and noting indicators of seasonal high water table levels, as well as recording soil profiles, water table levels and estimates of seasonal high water levels in the twenty (20) SPT borings completed in proposed retention ponds and mitigation areas. Also included are five (5) SPT borings in selected out parcels and five (5) SPT borings performed in the proposed Publix.

GENERAL SITE CONDITIONS

This project is located in the west central portion of Pasco County just west of the Suncoast Parkway on the southeast corner of SR 52 and Suncoast Lakes Boulevard, as shown on our attached site location map. A color aerial photograph of the project site is included as an attachment to this report. The site is moderately wooded with a borrow lake present in the approximate center of the property, an existing lake and smaller drainage pond located near the southwest corner of the site, and a fenced drainage pond present just northeast of the borrow lake. The borrow lake is situated where a significant amount of the development is planned and thus will need to be properly drained and filled. More specific recommendations relating to this procedure will be addressed later in this report.

Low growing brush and palmettos had been recently cut throughout the majority of the property to allow access to Florida Design Consultants (FDC) personnel and for this investigation. A site map showing the location of our roadway borings (RB-101 through RB-105 and RB-107 through RB-113), pond borings (PB-101 through PB-107), mitigation area borings (MB-101 through MB-113), out parcel borings (OB-101 through OB-105), and Publix borings (XB-101, XB-104 through XB-107) is also included as an attachment. This layout describes which boring locations, specifically RB-106, RB-107, RB-108, XB-102, and PB-101, were either moved , not staked, or eliminated due to the lake.

As will be noted in the individual boring sections presented later in this report, some of the boring logs included were generated during a previous geotechnical investigation that was halted at your direction prior to being fully completed. Since some of these previously performed borings were determined to be at or near certain locations designated for this investigation, they have been incorporated into this report. These borings will be identified by the new designation shown on the location map as well as their original label when originally performed.

Test Methods

The borings were done 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 rotary 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.

Hand auger borings were accomplished with the use of posthole diggers and the Iwan type of hand auger. This method of sampling allows for soil samples in approximately six-inch vertical increments to be retrieved to the surface for visual classification and collection.

DISCUSSION OF LABORATORY TESTING

Samples obtained in the field were visually classified following NRCS (Natural Resource Conservation Service) guidelines, which closely resemble ASTM D-2488, titled "Description and Identification of Soils". This visual method is used to describe samples encountered in the field, which are labeled and brought back to our laboratory in sealed containers and inspected by our Staff Geologist.

All soils are then dried to a constant weight and prepared for the appropriate testing, which may consist of any or all of the following:

1. Sieve analysis per AASHTO Designation T 27-93

2. Atterburg Limits of Soils - AASHTO T 89-94 & T 90-94

3. Organic Content of Soils - AASHTO T 267-86

Based on results of appropriate tests, the soils are classified per AASHTO M 145-91.

PROPOSED MITIGATION AREAS

A total of thirteen (13) SPT borings were completed to determine the soil profile, current water table levels, and estimates of historical seasonal high water table levels.

With the exception of conditions encountered at locations MB-103 and MB-113, soils were generally found to consist of slightly loose to medium dense granular sands to depths of at least 20 feet. At MB-103, a very loose black silty sand was recorded from -12.0 to -27.0 feet that was determined to contain marginally organic matter. Depending on the uniformity of this material, it may be suitable for use as fill but would need to be checked on a periodic basis prior to being used. AT MB-113, a thin layer of sandy clay was found from -9.0 to -11.0 feet that will not be suitable for use as fill due to its expansive properties. At this same location, very loose (WOR) conditions were found from -20.0 to -27.0 feet in a fine sand containing a trace of clay. Consistency of the soils below this depth were checked and found to be medium dense to the termination depth of -31.5 feet.

Current water table levels ranged from -2.6 to -6.1 feet below existing ground while estimates of seasonal high water table (SHWT) levels were estimated from -0.3 to -2.0 feet, depending on location.

PROPOSED PONDS

A total of seven (7) pond borings were performed that generally found slightly loose to medium dense granular sands present to depths of at least 25 feet. At two (2) boring locations, PB-101 and PB-102, unusable sandy clay soils were present from -11.0 to -15.0 feet and from -15.0 to -21.0 feet below existing ground, respectively. These

cohesive soils are not suitable for use as fill and thus should not be excavated for this purpose.

Current water table levels ranged from -1.9 to -5.5 feet below existing ground while estimates of seasonal high water table (SHWT) levels were estimated from surface to -1.0 feet, depending on location.

As indicated by the data obtained, water table levels ranged from -0.5 feet to -7.0 feet below existing ground, depending on location, with estimates of historical seasonal high water levels ranging from +0.5 feet above the surface to -3.0 feet below existing ground. As in the roadway areas of the site, water table levels appear to be suppressed due to the normal "dry" season.

Suitable fill soils were generally encountered to a depth of at least 25 feet with the exception of the isolated clay strata found at PB-101 and PB-102.

Please be aware that this information is based on the conditions found at the specific locations tested and may or may not be representative of the entire area of the proposed ponds and mitigation area.

Non-plastic granular fine sands are suitable for use as structural fill and could be used in roadways or building areas. Layers of plastic clay soils and soils with high organic content are not suitable for these applications and should not be excavated for this purpose, if encountered.

NRCS SOILS DATA

The NRCS (Natural Resource Conservation Service) shows the site, prior to development, as containing the following predominant soil series with associated SHWT levels:

Soil Series	**SHWT (ft)**	**Season Occurring**
Smyrna	0.0 to -1.0	July-October
Pomello	-2.0 to -3.5	July–November
Sellers	+2.0	June–March

Our site-specific data generally agrees with these listings but feels the Pomello designation is more limited than shown. This is reflected in the profiles encountered as well as our estimates of actual SHWT levels.

OUTPARCEL BORINGS

Five (5) SPT borings were drilled to depths of 25 feet to determine soil profiles and N values in the out parcels situated near the proposed entrance road coming off of SR 52. Borings OB-101 to OB-104 are west of the planned entrance while OB-105 is located on the eastern side of this future roadway. OB-101 and OB-2 were previously

performed and were originally labeled SPT-1 and SPT-3. Both designations are shown on the attached boring logs. The remaining borings were all performed earlier this year.

Conditions encountered varied depending on location, with OB-101 finding medium dense soils within the upper 5 feet followed by loose to slightly loose sands to a depth of 15 feet. Medium dense sands were present again from -15 to -25 feet, at which point the boring was terminated. OB-102 discovered medium dense sands from the surface to a depth of 10 feet at which point loose to very loose sands extended to depth of 30 feet. The boring was terminated at this point with a slight increase in penetration resistance occurring from -20 to -30 feet.

OB-103 encountered a very uniform profile of medium dense granular sands from the surface to the termination depth of 25 feet. OB-104, performed southeast of OB-103, found very loose to slightly loose organic rich soils within the upper 3.5 feet of the profile. Below this depth, generally medium dense granular sands were encountered to a depth of 25 feet. The organic content of these soils was determined to be 12.3 %.

OB-105 found the upper 5 feet to consist of medium dense sands with the top 2 feet containing a significant amount of roots. Below this depth, loose sands were present to -10.0 feet followed by medium dense sands to a depth of 25 feet.

Current water table levels ranged from -4.7' at OB-104 to -4.9' at OB-103.

General Building Foundation Recommendations

Soils described by SPT borings OB-101 and OB-102 are generally satisfactory for supporting standard shallow spread footer foundations.

Conditions at OB-103 found soils that would also be capable of supporting standard spread footer construction while OB-104 found unsuitable organic soils from the surface to a depth of 3.5 feet that are not suitable for standard construction and thus would need to be removed and replaced with suitable structural fill compacted to project specifications.

Soil profiles recorded at OB-105 are suitable for standard spread footer construction provided that the roots found within the upper 2 feet are removed and properly replaced with suitable structural fill.

In order to provide specific recommendations regarding allow soil pressure values for design purposes for both the above out parcels, a more extensive geotechnical investigation performed within the footprint of the planned commercial structures would be required. This investigation would include auger borings and associated lab testing of the soils to better define the shallow organic soils discovered by this investigation.

PUBLIX BORINGS

Only five (5) of the seven (7) borings could be performed, with XB-102 and XB-103 not being staked or drilled due to conflicts with the existing borrow lake. At location XB-101, located in the SW corner of the proposed main structure, medium dense to loose sands were found to a depth of roughly 3 feet followed by very loose sands with organics from -3.0 to -6.5 feet. Soils within this strata were tested and found to contain 6.4% organic matter, by weight. Below this depth, a variety of loose to medium dense sands were encountered to a depth of 25 feet. Conditions at XB-104, located in the northeast corner of the main structure, found loose to very loose soils starting at the surface and continuing to a depth of approximately 12.5 feet. Organic rich soils (11.0%) were recorded from -2.5 to -4.5 feet, with the upper 2.5 feet of soils being described as containing a significant amount of roots. From roughly -15.0 to -25.0 feet, medium dense granular fine sands were found. At location XB-105, a highly organic rich soil (muck) was present from the surface to -1.0 feet followed by loose to slightly loose fine sands to a depth of -4.5 feet. At this depth, a very loose strata of organic soils (8.1%) continued to -7.0 feet. Soils below this depth consisted of loose to medium dense fine sands to -25.0 feet. Conditions at XB-106, located in the southeast corner of the planned building, found a variety of undesirable conditions starting with loose sands and sands with organics within the upper 4 feet, followed by loose sands to -8.0 feet at which point a very loose and with organics (6.5%) that extended to a depth of 17.0 feet. Within this strata a very loose weight of hammer (WOH) condition was recorded from approximately -8.0 to -14.0 feet. Soils below this depth were medium dense fine sands that continued to a depth of -25.0 feet. Boring XB-107, performed in the planned truck well on the southern side of the building, found medium dense sands to a depth of roughly 5.0 feet followed by very loose to loose sands to approximately -10.0 feet. At -10.0 feet, slightly loose sands were followed by medium dense sands to -20.0 feet. Loose fine sands terminated the boring at the prescribed termination depth of 25 feet.

Recommendations

Due to the inconsistency of conditions encountered, which included variable upper soils consisting of low bearing organic rich sands and deeper soils that exhibited WOH penetration values, we recommend that additional geotechnical services be performed before foundation recommendations are provided for the proposed Publix. Taking into account that a portion of the planned building will over an existing borrow lake, additional borings should be taken within the lake after is it drained to determine its bottom condition, and/or at least along the perimeter of the lake (where accessible) and also in the area of XB-106 to determine the extent of the very loose soil profile recorded at this location. Based upon the findings of the supplemental borings, foundation recommendations may include removal and replacement of unsuitable soils, specialized shallow foundations, deep piling foundations and/or subsurface grouting. These specific recommendations could only be made after the completion and review of a supplemental investigation.

ROADWAY PROFILE BORINGS

The twelve (12) roadway borings, detailed on pages 1 and 2 of the accompanying hand auger profile sheets, identified ten (10) granular fine sands and granular fine sands with a trace of roots classified as A-3 by the AASHTO soil classification system. In addition, two (2) soils containing various amounts of organic matter, classified as A-8 by the AASHTO soil classification system, were also identified. Sample 3, found at borings RB-101 (-3.5 to -4.5 feet) and RB-111 (surface to -0.3 feet) had an organic content of 15.6%, while sample 11, found at boring RB-108 (surface to -1.5 feet) was determined to contain 36.9% organics. These materials are unsuitable for use and thus will need to be removed during normal grubbing and stripping operations.

Although it was determined to be suitable from a composition standpoint based on samples obtained at each location encountered, sample 2 was found to have an average organic content of 4.7%, which is close to the industry recognized threshold of 5.0%. For this reason, conditions in the areas where this material was found should be checked during initial site work operations to insure that no pockets with higher concentrations of organic matter are present that were not discovered by this investigation. These soils are all described, along with their corresponding Munsell designation, on the hand auger profile sheets accompanying this report.

As noted on the test location map, RB-106 was not performed since it was located in the middle of the existing borrow lake. In addition to this boring being omitted, borings RB-107 and RB-108 were staked along the edge of the existing lake.

Water table levels were found ranging from -1.1 to > -6.0 feet below the existing ground surface with indicators of historical seasonal high water levels found ranging from the surface to -2.4 feet below existing ground, depending on location.

Pavement Recommendations

Based on conditions found at the locations tested, a portion of the planned parking and drive areas contain shallow organic rich soils that will need to be removed and replaced with suitable structural fill. This is in addition to the majority of the future pavement areas that are currently comprised of the borrow lake. In order to insure that the finished pavement meets project specifications, the lake will need to be drained so that conditions in the bottom of the lake can be determined. Once this is accomplished, the lake will need to be properly filled to design grades under engineering guidelines.

Provided that these procedures are accomplished, conditions should be suitable for supporting standard parking lot and pavement construction. The noncohesive nature of the upper sandy soils would most likely require stabilization under typical base construction of crushed aggregate materials such as limerock or crushed concrete, however, soil cement bases generally do not use stabilization unless heavy traffic volumes dictate it by design. The existing noncohesive sandy soils, assuming no filling is to take place, have a Soil Support Value of approximately 5.0. Flexible Pavement

Design procedures would generally require a stabilization value of LBR 40 for subgrade supporting crushed limerock base or crushed concrete material and/or soil cement base material with a compressive strength of 300 psi or less at 7 days of age. The use of underdrains to control high water tables may be needed based upon SHWT levels unless pavement grades are raised from existing grades. We suggest that after completion of the preliminary construction drawings that our office be given a chance to review grades and comment further on the need for underdrains.

CONCLUSIONS

This limited investigation has identified several soil constraints that need to be addressed. Specifically, borings labeled as OB-104 and OB-105, staked in the eastern portion of the out parcels located near the planned entrance road, found shallow organic rich soils that will need to be removed and replaced with suitable structural fill. In the planned Publix building, only five (5) of the seven (7) desired locations could be drilled due to a portion of the building also planned to sit over the existing lake. Within the five locations drilled, several found unsuitable conditions consisting of shallow organic soils and a very weak profile at location XB-106. Isolated shallow organic soils were also found in areas of proposed roadways and parking that will need to be removed during site clearing operations. Due to these conditions, we have recommended that additional services be performed in both the outparcels and the planned Publix. We are available to meet in the field or at FDC to establish the location of the supplemental borings and the full scope of services deemed necessary to provide this information.

LIMITATIONS

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

The boring data represents only that data obtained during this investigation at the specific locations shown on the site reduction attached to this report.

As always, we appreciate this opportunity to be of service and are available to answer any questions that might arise regarding this matter.

Sincerely,

CENTRAL FLORIDA TESTING LABORATORIES, INC.

Tom Gates
Director of Technical Services

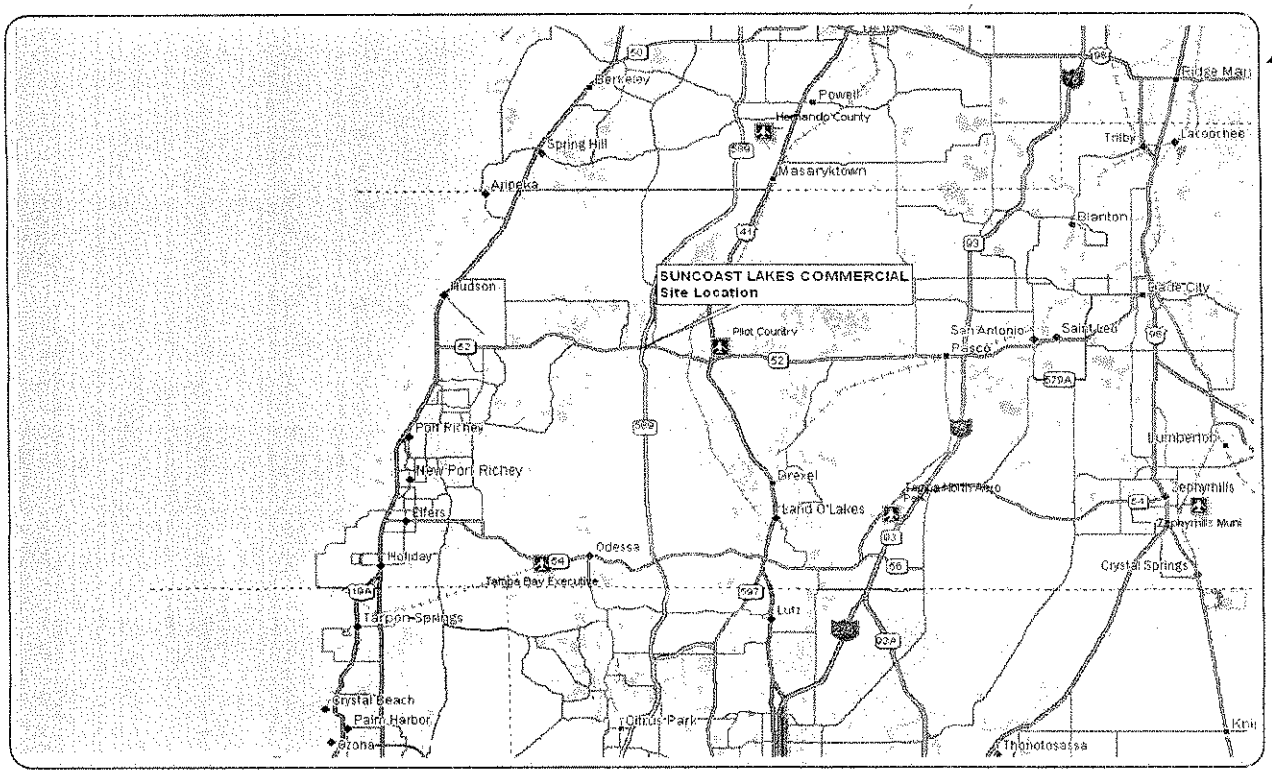
George C. Sinn, Jr., P.E.
President 3-5-07
Registration No. 16911

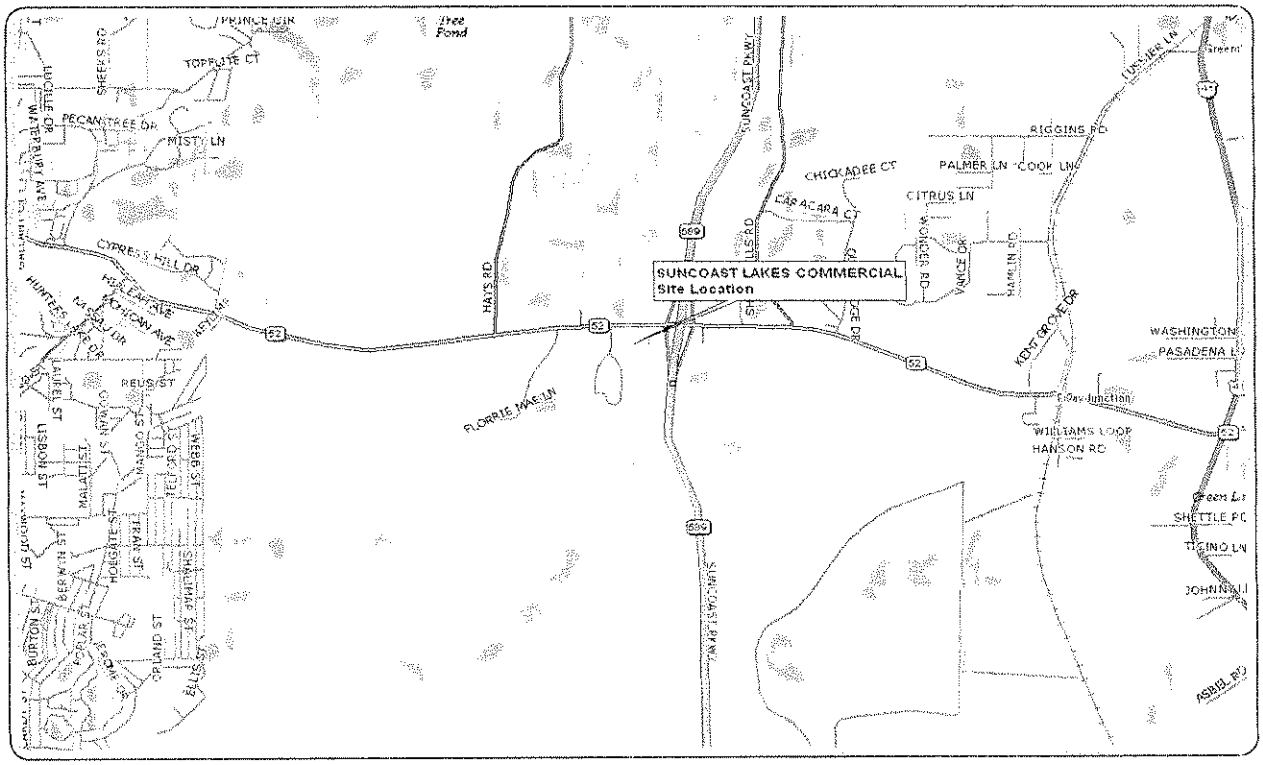
TG/GCS/rm
attachments

cc: Mr. Octavio Cabrera, P.E. – Florida Design Consultants, Incorporated

MAPS

Various





CFTL Central Florida Testing Laboratories, Inc.

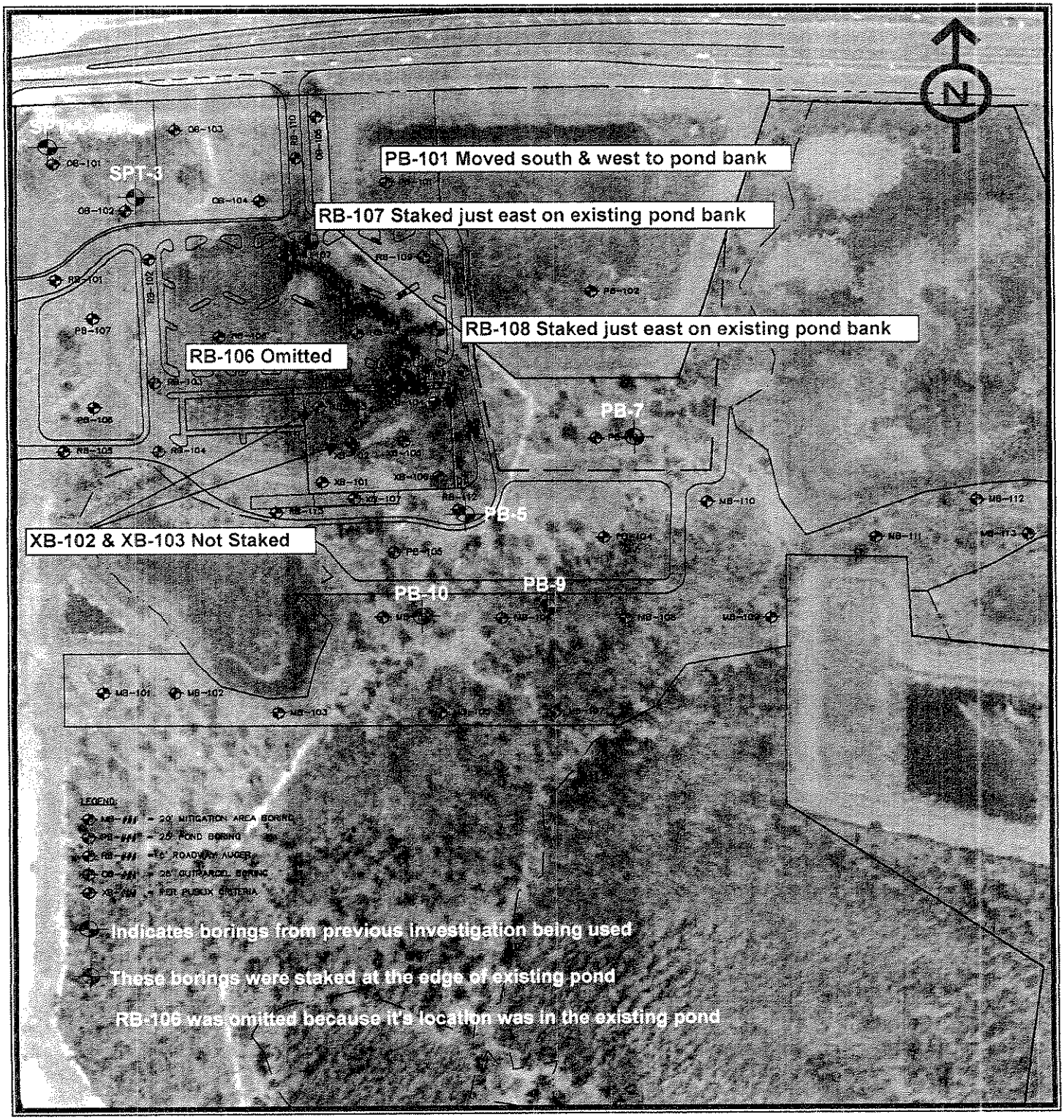
Project: Suncoast Lakes Commercial
Lab No: 189520
Location: Pasco County, Florida

Legend

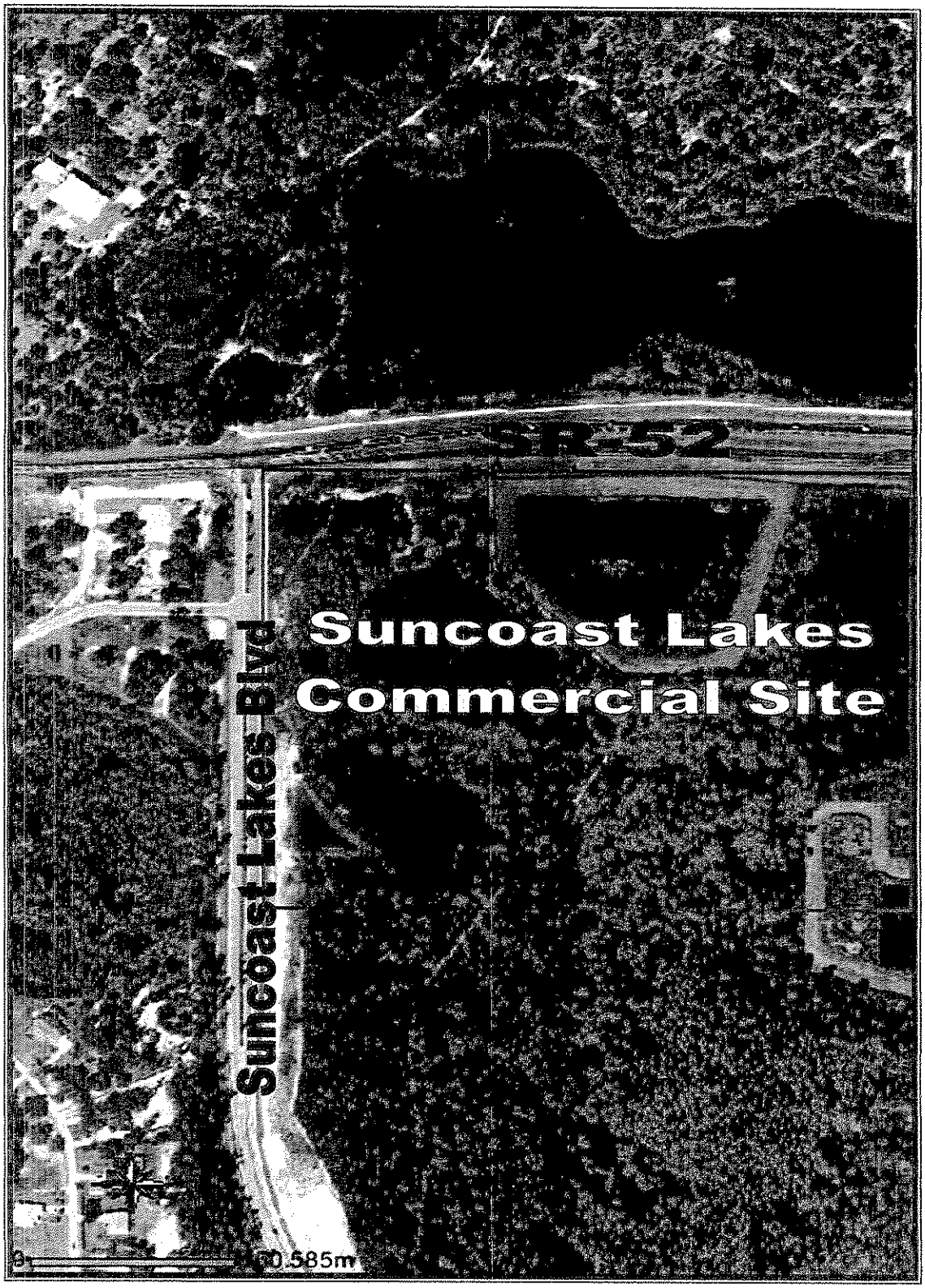
Subject Property	Interstate	Water
Population Center	Toll Highway	Intermittent Lake
Land	US Highway	Wetland
Sand	State Route	River/Canal
Woodlands	Local Road	Intermittent River
Park	Major Connector	Railroad

Figure 1 - Location

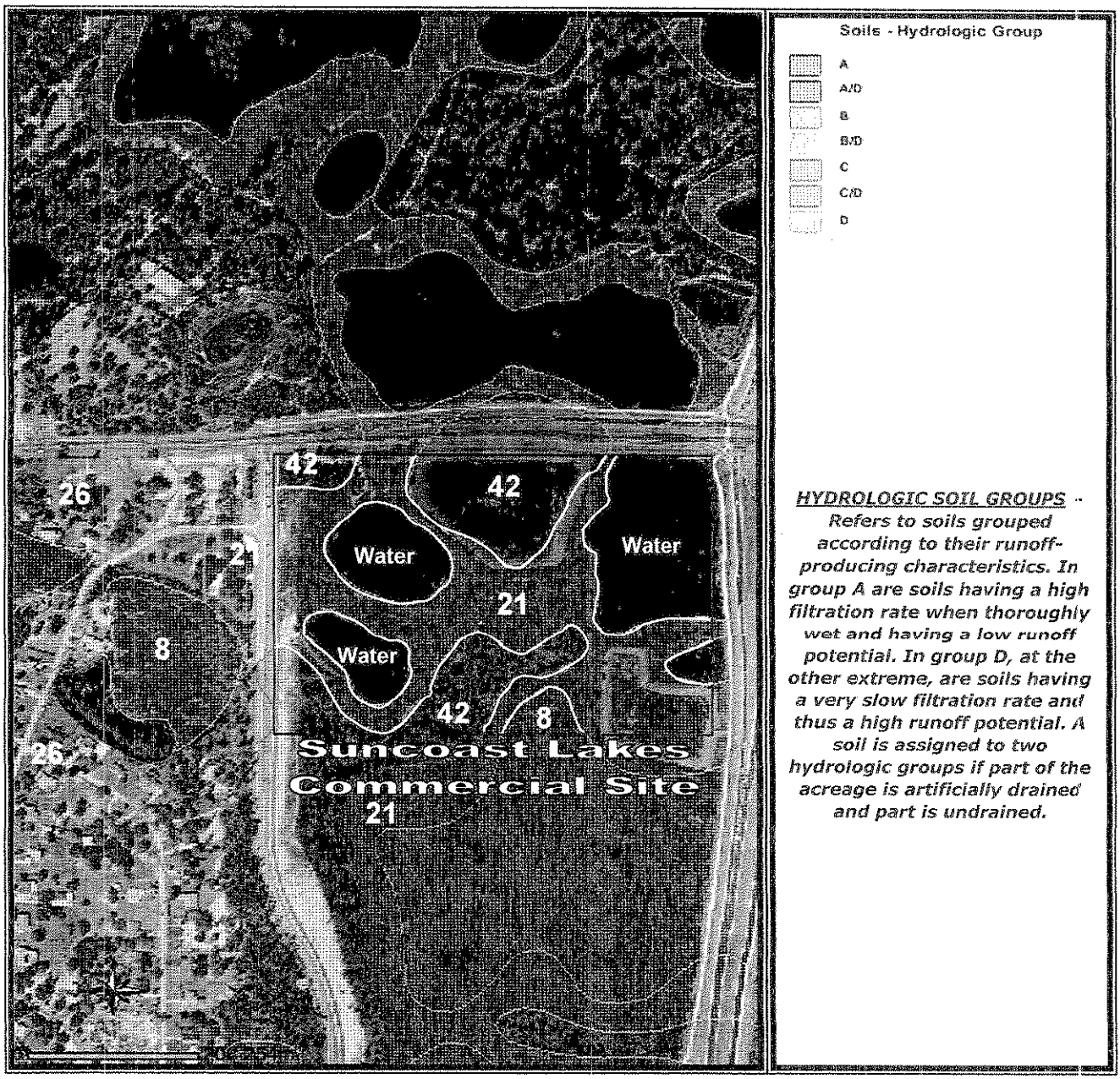
Test Locations Map



Aerial Photograph of Site



NRCS Soils Map



HYDROLOGIC SOIL GROUPS - *Refers to soils grouped according to their runoff-producing characteristics. In group A are soils having a high filtration rate when thoroughly wet and having a low runoff potential. In group D, at the other extreme, are soils having a very slow filtration rate and thus a high runoff potential. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained.*

SoilName & Number	NRCS SHWT (ft)	Months Apparent
21 - Smyrna	0.0 to -1.0	July - October
42 - Pomello	-2.0 to -3.5	July - November
8 - Sellers	+2.0	June - March

Shallow Auger Borings
&
Laboratory Data

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Project: Suncoast Lakes Commercial	Location: Pasco County, Florida
Lab No: 189520	Client: Rizk Florida JV

HAND AUGER BORINGS

BORING NO.	DEPTH (ft.)	SOIL COLOR	MUNSELL COLOR	SOIL DESCRIPTION	SAMPLE NO.
RB-101	0.0 - 1.8	Gray	(10YR 5/1)	fine sand w/small roots	1
elev.	1.8 - 3.5	Dark gray	(10YR 4/1)	fine sand w/small roots	2
53.41	**3.5 - 4.5**	**Black**	**(10YR 2/1)**	**sandy muck w/small roots**	3
	4.5 - 5.0	Very dark grayish brown	(10YR 3/2)	fine sand w/small roots	4
	5.0 - 6.0	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
RB-102	0.0 - 2.5	Dark gray	(10YR 4/1)	fine sand w/small roots	2
elev.	2.5 - 3.0	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
49.99	3.0 - 6.0	Brownish yellow	(10YR 6/6)	fine sand	6
RB-103	0.0 - 1.3	Brown	(10YR 5/3)	fine sand w/trace small roots	7
elev.	1.3 - 5.0	Light gray	(10YR 7/1)	fine sand w/small roots	8
51.94	5.0 - 5.5	Brown	(10YR 5/3)	fine sand w/trace small roots	7
	5.5 - 6.0	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
RB-104	0.0 - 1.0	Gray	(10YR 5/1)	fine sand w/small roots	1
elev.	1.0 - 3.0	Brown	(10YR 5/3)	fine sand w/trace small roots	7
51.13	3.0 - 3.6	Dark gray	(10YR 4/1)	fine sand w/small roots	2
	3.6 - 6.0	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
RB-105	0.0 - 2.0	Gray	(10YR 5/1)	fine sand w/small roots	1
No	2.0 - 5.0	Light gray	(10YR 7/1)	fine sand w/small roots	8
Stake	5.0 - 6.0	Dark yellowish brown	(10YR 3/6)	fine sand	9
RB-106		BORING WAS NOT STAKED. DESIRED LOCATION IS IN EXISTING LAKE.			
RB-107	0.0 - 1.6	Dark gray	(10YR 4/1)	fine sand w/small roots	2
elev.	1.6 - 3.4	Gray	(10YR 5/1)	fine sand w/small roots	1
49.03	3.4 - 6.0	Very pale brown	(10YR 7/3)	fine sand w/small roots	10
		THIS STAKE WAS PLACED NE OF THE LOCATION SHOWN ON THE PROVIDED SITE LAYOUT.			

The above information represents only those materials within the specified limits of the individual test location at the time the test was conducted. No further assumptions or interpretations can be made regarding additional site conditions not specifically addressed.

HAND AUGER BORINGS

BORING NO.	DEPTH (ft.)	SOIL COLOR	MUNSELL COLOR	SOIL DESCRIPTION	SAMPLE NO.
RB-108	0.0 - 1.5	**Black**	**(10YR 2/1)**	**muck w/small roots**	11
elev.	1.5 - 2.0	Gray	(10YR 5/1)	fine sand w/small roots	1
52.41	2.0 - 3.8	Brown	(10YR 5/3)	fine sand w/trace small roots	7
	3.8 - 6.0	Very pale brown	(10YR 7/3)	fine sand w/small roots	10
		THIS STAKE WAS PLACED EAST OF THE LOCATION SHOWN ON THE PROVIDED SITE LAYOUT.			
RB-109	0.0 - 2.0	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
elev.	2.0 - 3.6	Brown	(10YR 5/3)	fine sand w/trace small roots	7
49.13	3.6 - 6.0	Brown	(10YR 5/3)	fine sand	12
RB-110	0.0 - 1.5	Dark gray	(10YR 4/1)	fine sand w/small roots	2
elev.	1.5 - 2.8	Brown	(10YR 5/3)	fine sand w/trace small roots	7
51.48	2.8 - 3.7	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
	3.7 - 6.0	Brownish yellow	(10YR 6/6)	fine sand	6
RB-111	0.0 - 0.3	**Black**	**(10YR 2/1)**	**sandy muck w/small roots**	3
elev.	0.3 - 1.6	Light gray	(10YR 7/1)	fine sand w/small roots	8
52.91	1.6 - 2.5	Very pale brown	(10YR 7/3)	fine sand w/small roots	10
	2.5 - 2.8	Dark yellowish brown	(10YR 3/6)	fine sand	9
	2.8 - 3.0	Brownish yellow	(10YR 6/6)	fine sand	6
	3.0 - 6.0	Very pale brown	(10YR 7/3)	fine sand w/small roots	10
RB-112	0.0 - 1.8	Light gray	(10YR 7/1)	fine sand w/small roots	8
No	1.8 - 2.0	Dark gray	(10YR 4/1)	fine sand w/small roots	2
Stake	2.0 - 2.7	Dark yellowish brown	(10YR 3/6)	fine sand	9
	2.7 - 3.0	Light gray	(10YR 7/1)	fine sand w/small roots	8
	3.0 - 3.6	Dark yellowish brown	(10YR 3/6)	fine sand	9
	3.6 - 5.2	Yellowish brown	(10YR 5/4)	fine sand w/trace small roots	5
	5.2 - 6.0	Brown	(10YR 5/3)	fine sand w/trace small roots	7
RB-113	0.0 - 4.6	Very pale brown	(10YR 7/3)	fine sand w/small roots	10
elev.	4.6 - 6.0	Brownish yellow	(10YR 6/6)	fine sand	6
51.47					

WATER TABLE & SEASONAL HIGH WATER TABLE DETERMINATIONS

LOCATION	WATER TABLE (ft.)	SEASONAL HIGH WATER LINE (ft.)*
RB-101	> -6.0	-2.4
RB-102	-3.3	-0.4
RB-103	-4.6	-1.3
RB-104	-4.2	-1.0
RB-105	-5.7	-2.0
RB-106	Unable to perform - location in existing lake	
RB-107	-1.9	-0.2
RB-108	-4.8	Surface
RB-109	-1.1	Surface
RB-110	-4.2	-1.0
RB-111	-5.2	Surface
RB-112	-5.5	-1.4
RB-113	-3.1	-0.6

* *Measured from existing ground elevation at time of test.*

** *Indication of Seasonal High Water Line denoted at possible "leached" area above existing water table and referenced below existing ground elevation. Interpretation of SHWL is approximate and may vary +/- 6 inches..*

WASHED GRADATION OF MATERIALS

SAMPLE NUMBER - PERCENT PASSING

SIEVE	1	2	3	4	5	6
1/2"	100	100	N/A	100	100	100
3/8"	100	100	N/A	100	100	100
No. 4	100	100	N/A	100	100	100
No. 10	99	100	N/A	100	100	100
No. 20	98	99	N/A	100	100	100
No. 40	93	96	N/A	97	97	97
No. 80	54	44	N/A	46	44	47
No. 200	4	5	N/A	4	3	2
No. 270	3	4	N/A	3	2	1

SIEVE	7	8	9	10	11	12
1/2"	100	100	100	100	N/A	100
3/8"	100	100	100	100	N/A	100
No. 4	100	100	100	100	N/A	100
No. 10	100	100	100	100	N/A	100
No. 20	100	99	100	100	N/A	100
No. 40	97	96	97	97	N/A	99
No. 80	45	44	48	51	N/A	28
No. 200	2	2	4	1	N/A	2
No. 270	2	2	2	0	N/A	0

AASHTO SOIL CLASSIFICATION

SAMPLE NO.	CLASSIFICATION
1	A-3
2	A-3
3	A-8
4	A-3
5	A-3
6	A-3
7	A-3
8	A-3
9	A-3
10	A-3
11	A-8
12	A-3

INDEX

Granular Materials	Silt-Clay Materials
A-1 = Stone Fragments, Gravel & Sand.	A-4 = Silty Soils.
A-2 = Silty or Clayey, Gravel and Sand.	A-5 = Silty Soils.
A-3 = Fine Sand	A-6 = Clayey Soils.
	A-7 = Clayey Soils

ATTERBURG LIMITS

SAMPLE NUMBER	1	2	3	4	5	6
LIQUID LIMIT	16	16	--	16	16	16
PLASTIC LIMIT	NP	NP	--	NP	NP	NP
PLASTICITY INDEX	NP	NP	--	NP	NP	NP
ORGANIC CONTENT	--	4.7%	15.6%	--	--	--

SAMPLE NUMBER	7	8	9	10	11	12
LIQUID LIMIT	16	16	16	16	--	16
PLASTIC LIMIT	NP	NP	NP	NP	--	NP
PLASTICITY INDEX	NP	NP	NP	NP	--	NP
ORGANIC CONTENT	--	--	--	--	36.9%	--

NP = ***Non-plastic***

Mitigation Borings

Central Florida Testing Laboratories, Inc.
12625 – 40th Street North, Clearwater, FL 33762

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-101
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Brown 10yr 5/3, fine grained with roots					
		Sand Pale brown 10yr 6/3, fine grained	medium dense	3-4-6	10		
		Sand Dark yellowish brown 10yr 4/4, fine grained	loose	4-3-3	6		
5		***Sand*** Yellowish brown 10yr 5/6, fine grained					
		Sand Brown 10yr 5/3, fine grained	medium dense	5-5-9	14		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	9-9-12	21		
10		***Sand*** Very dark brown 10yr 2/2, fine grained	medium dense	7-7-13	20		
15		***Sand*** Brown 10yr 5/3, fine grained	medium dense	6-6-9	15		
20			medium dense	5-5-6	11		
		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= - 1.2'

Water Table: - 5.0'
Ground Elevation: 51.76'
Drilled by: JS/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-102
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained with roots					
		Sand Brown 10yr 5/3, fine grained	medium dense	3-5-11	16		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	5-5-9	14		
5			medium dense	9-9-12	21		
		Sand Yellowish brown 10yr 5/6, fine grained	medium dense	7-9-15	24		
10		***Sand*** Brown 10yr 5/3, fine grained	medium dense	3-6-9	15		
15		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	4-4-6	10		
		Sand Brown 10yr 5/3, fine grained	medium dense	4-6-13	19		
20		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= -1.0'

Water Table: - 4.4'
Ground Elevation: 51.44'
Drilled by: JS/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-103
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained with roots	slightly loose	4-3-4	7		
		Sand Yellowish brown 10yr 5/6, fine grained	medium dense	5-5-11	16		
5		***Sand*** Pale brown 10yr 6/3, fine grained	slightly loose	3-4-5	9		
		Sand Yellow 10yr 8/6, fine grained	medium dense	4-5-11	16		
10		***Sand*** Brown 10yr 5/3, fine grained	medium dense	5-5-6	11		
15			very loose	1-0-1	1		
20		***Sand*** Black silty 10yr 2/1	very loose	1-0-0	0		
25			loose	2-1-3	4		
30		***Sand*** Yellowish brown 10yr 5/6, fine grained	medium dense	3-4-9	13		
		End of Boring					
35							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= - 0.3'

Water Table: - 2.6'
Ground Elevation: 50.51'
Drilled by: JS/MS
Compiled by: DY

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

Client: GBY, Inc.
Project: Suncoast Lakes - SR52 Commercial
Location: State Route 52 & Suncoast Parkway
City / State: Pasco County, Florida

Report No: 178339
Log of Borehole: MB-104*
Date Drilled: 11/23/05

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Light brown (7.5YR 6/3), fine grained, with small roots.	slightly loose	2-3-4	7		
			medium dense	3-4-8	12		
5		***Sand*** Dark brown (10YR 3/3), fine grained.	slightly loose	3-4-5	9		
			medium dense	3-4-6	10		
10		***Sand*** Brown (10YR 5/3), fine grained.	slightly loose	3-3-4	7		
15			medium dense	3-6-8	14		
20		***Sand*** Light brown (7.5YR 6/3), fine grained.	slightly loose	3-4-4	8		
25			medium dense	3-4-6	10		
		End of Boring					
30							

Notes: NRCS Designation: Smyrna
NRCS SHGWT: 0' to -1.0'
CFTL SHGWT: -0.4'
* Peviously Labeled PB-10
Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

Water Table: -1.5' bls
Ground Elevation: 52.6'
Drilled by: AC/AJ
Compiled by: PG

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-105
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained with roots					
		Sand Brown 10yr 5/3, fine grained	dense	9-15-15	30		
		Sand White 10yr 8/1, fine grained					
		Sand Yellowish brown 10yr 5/6, fine grained	medium dense	4-5-9	14		
5		***Sand*** Brown 10yr 5/3, fine grained	slightly loose	5-4-5	9		
		Sand Yellowish brown 10yr 5/6, fine grained	medium dense	4-6-6	12		
10		***Sand*** Brown 10yr 5/3, fine grained	medium dense	5-9-12	21		
15		***Sand*** Dark brown 10yr 3/3, fine grained	slightly loose	5-4-5	9		
20		***Sand*** Brown 10yr 5/3, fine grained	medium dense	5-6-10	16		
		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= - 2.0'

Water Table: - 5.6'
Ground Elevation: 53.02'
Drilled by: JS/MS
Compiled by: DY

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

Client: GBY, Inc.
Project: Suncoast Lakes - SR52 Commercial
Location: State Route 52 & Suncoast Parkway
City / State: Pasco County, Florida

Report No: 178339
Log of Borehole: MB-106*
Date Drilled: 11/23/05

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
		Ground Surface					
0		***Sand*** Very pale brown (10YR 8/2), fine grained, with small roots.	slightly loose	2-3-4	7		
		Sand White (10YR 8/1), fine grained.	medium dense	2-4-8	12		
5		***Sand*** Brown (10YR 5/3), fine grained.	medium dense	4-4-7	11		
			medium dense	2-3-7	10		
10		***Sand*** Light brown (7.5YR 6/3), fine grained.	medium dense	2-4-8	12		
15			slightly loose	2-3-5	8		
		Sand Brown (10YR 5/3), fine grained.					
20			slightly loose	3-4-5	9		
		Sand Light brown (7.5YR 6/3), fine grained.					
25		***Sand*** Brown (10YR 5/3), fine grained.	medium dense	3-4-7	11		
		End of Boring					
30							

Notes: NRCS Designation: *Smyrna/Pomello*
NRCS SHGWT: 0' to -1.0'/-2.0' to -3.5'
CFTL SHGWT: -1.0' bls
*Previously labeled PB-9
Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

Water Table: -2.8' bls
Ground Elevation: 53.7'
Drilled by: AC/AJ
Compiled by: PG

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-107
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
		Ground Surface					
0		***Sand*** Gray 10yr 6/1, fine grained with roots					
		Sand Brown 10yr 5/3, fine grained	medium dense	5-9-9	18		
		Sand Light brown 7.5yr 5/3, fine grained					
		Sand Dark yellowish brown 10yr 3/4, fine grained	medium dense	5-6-6	12		
5		***Sand*** Yellowish brown 10yr 5/6, fine grained	medium dense	5-6-11	17		
			medium dense	7-7-13	20		
10		***Sand*** Brown 10yr 5/3, fine grained	medium dense	5-6-11	17		
15		***Sand*** Yellow 10yr 7/8, fine grained	medium dense	5-7-9	16		
		Sand Brown 10yr 5/3, fine grained	medium dense	4-7-11	18		
20		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= - 1.1'

Water Table: - 4.4'
Ground Elevation: 52.01'
Drilled by: JS/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-108
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained with roots					
		Sand Light brown 7.5yr 5/3, fine grained	medium dense	4-6-12	18		
		Sand Brown 10yr 5/3, fine grained	medium dense	5-8-8	16		
5		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	5-6-11	17		
		Sand Brown 10yr 5/3, fine grained	medium dense	7-11-13	24		
10		***Sand*** Yellow 10yr 7/8, fine grained	medium dense	5-6-12	18		
		Sand Brown 10yr 5/3, fine grained					
15			medium dense	9-9-16	25		
		Sand Dark brown 10yr 3/3, fine grained					
		Sand Brown 10yr 5/3, fine grained					
20			dense	10-10-21	31		
		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= -1.1'

Water Table: - 4.2'
Ground Elevation: 52.32'
Drilled by: JS/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-109
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained with roots					
		Sand White 10yr 8/1, fine grained	medium dense	3-5-7	12		
		Sand Brown 10yr 5/3, fine grained	medium dense	5-6-9	15		
5		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	6-6-5	11		
			medium dense	5-6-7	13		
10			medium dense	7-7-9	16		
		Sand Light brown 7.5yr 5/3, fine grained					
15			dense	15-17-14	31		
		Sand Brown 10yr 5/3, fine grained					
20			medium dense	8-10-12	22		
		End of Boring					
25							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= - 1.7'

Water Table: - 5.3'
Ground Elevation: 52.95'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-110
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand White 10yr 8/1, fine grained	medium dense	4-5-7	12	●	
		Sand Light brown 7.5yr 5/3, fine grained	medium dense	5-7-9	16	●	
5		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	6-7-8	15	●	
			medium dense	6-6-7	13	●	
10			medium dense	4-6-6	12	●	
		Sand Brown 10yr 5/3, fine grained					
15			medium dense	4-6-7	13	●	
		Sand Pale brown 10yr 6/3, fine grained					
20			medium dense	7-7-8	15	●	
		End of Boring					
25							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 2.0'

Water Table: - 6.1'
Ground Elevation: 53.93'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-111
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Dark gray 10yr 4/1, fine grained					
		Sand Light brown 7.5yr 5/3, fine grained	medium dense	3-5-7	12		
			medium dense	5-5-7	12		
5		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	5-5-6	11		
		Sand Brown 10yr 5/3, fine grained	slightly loose	5-4-4	8		
10			slightly loose	2-3-4	7		
		Sand Dark brown 10yr 3/3, fine grained					
15		***Sand*** Black 10yr 2/1, fine grained	slightly loose	2-2-7	9		
		Sand Dark brown 10yr 3/3, fine grained					
20			medium dense	5-6-8	14		
		End of Boring					
25							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 1.2'

Water Table: - 5.7'
Ground Elevation: 52.59'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-112
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 6/1, fine grained					
		Sand White 10yr 8/1, fine grained	slightly loose	2-3-5	8		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	5-6-8	14		
5		***Sand*** Brown 10yr 5/3, fine grained	medium dense	4-5-6	11		
			medium dense	3-4-6	10		
10		***Sand*** Light brown 7.5yr 6/3, fine grained	slightly loose	2-4-5	9		
15			slightly loose	3-3-5	8		
		Sand Brown 10yr 5/3, fine grained					
20		***Sand*** Dark brown 10yr 3/3, fine grained	medium dense	4-5-7	12		
		End of Boring					
25							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 1.2'

Water Table: - 5.5'
Ground Elevation: 52.72'
Drilled by: AC/KJ
Compiled by: DY

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

TESTED • APPROVED
CFTL
CENTRAL FLORIDA TESTING LABORATORIES

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Mitigation Area Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: MB-113
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Dark gray 10yr 4/1, fine grained	slightly loose	2-2-5	7		
		Sand Black 10yr 2/1, fine grained					
		Sand Dark brown 10yr 3/3, fine grained	medium dense	5-7-9	16		
5		***Sand*** Brown 10yr 5/3, fine grained	slightly loose	4-5-3	8		
		Sand Dark brown 10yr 3/3, fine grained	loose	2-2-3	5		
10		***Clay*** Brown 10yr 5/3, sandy	firm	4-4-4	8		
15		***Sand*** Light brown 7.5yr 5/3, fine grained	loose	3-3-3	6		
20			very loose	WOR+7'	0		
25		***Sand*** Brown 10yr 5/3, fine grained with trace clay	very loose	WOR	0		
30			medium dense	5-5-7	12		
		End of Boring					
35							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 0.8'
WOR= weight of rod
Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

Water Table: - 5.0'
Ground Elevation: 52.24'
Drilled by: AC/KJ
Compiled by: DY

Pond Borings

Central Florida Testing Laboratories, Inc.
12625 – 40th Street North, Clearwater, FL 33762

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-101
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Light brown, 7.5yr 6/3, fine grained	loose	2-2-2	4		
		Sand Brown 10yr 5/3, fine grained	slightly loose	4-4-4	8		
5			slightly loose	2-3-6	9		
		Sand Light brown 7.5yr 6/3, fine grained	medium dense	7-9-10	19		
10			medium dense	6-9-6	15		
		Clay Gray 10yt 5/1, sandy					
15			medium dense	10-10-14	24		
20		***Sand*** White 10yr 8/1, fine grained	dense	14-14-17	31		
25			dense	10-15-16	31		
		End of Boring					
30							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= -2.0' to -3.5'
CFTL SHGWT= Surface

Water Table: - 2.0'
Ground Elevation: 49.13'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-102
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
		Ground Surface					
0		***Sand*** Dark gray 10yr 4/1, fine grained with roots					
		Sand Light brown 7.5yr 6/3, fine grained	loose	4-2-3	5		
		Sand Pale brown 10yr 6/3, fine grained	medium dense	8-10-12	22		
5		***Sand*** White 10yr 8/1, fine grained	medium dense	6-6-7	13		
		Sand Brown 10yr 5/3, fine grained	loose	2-2-4	6		
10			medium dense	3-5-6	11		
		Sand Light brown 7.5yr 6/3, fine grained					
15		***Clay*** Light brown 7.5yr 6/3, sandy	stiff	7-6-6	12		
		Clay Dark gray 10yr 4/1					
20			very hard	20-28-30	58		
		Sand White 10yr 8/1, fine grained					
25			medium dense	5-6-7	13		
		End of Boring					
30							

Notes: NRCS Soil Designation: Pomello
NRCS SHGWT= - 2.0' to -3.5'
CFTL SHGWT= - 0.3'

Water Table: - 1.9'
Ground Elevation: 49.68'
Drilled by: AC/KJ
Compiled by: DY

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

Client: GBY, Inc.
Project: Suncoast Lakes - SR52 Commercial
Location: State Route 52 & Suncoast Parkway
City / State: Pasco County, Florida

Report No: 178339
Log of Borehole: PB-103*
Date Drilled: 11/23/05

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Black, fine grained, with trace muck.					
		Sand Light brown (7.5YR 6/3), fine grained, with trace small roots.	medium dense	3-4-7	11		
			medium dense	5-6-7	13		
5		***Sand*** Dark yellowish brown (10YR 4/6), fine grained.	loose	2-2-3	5		
			slightly loose	2-3-6	9		
10			medium dense	3-5-7	12		
15		***Sand*** Dark brown (10YR 3/3), fine grained.	loose	2-2-4	6		
20			medium dense	3-4-6	10		
25		***Sand*** Light brown (7.5YR 6/3), fine grained.	slightly loose	2-4-4	8		
		End of Boring					
30							

Notes: NRCS Designation: Smyrna
NRCS SHGWT: 0' to -1.0'
CFTL SHGWT: +0.5' (above surface)
* Previously labeled PB-7
Drill Method: Rotary
Sampling Method: Splitspoon ASTM D-1586

Water Table: -0.5' bls
Ground Elevation: 52.1'
Drilled by: AC/AJ
Compiled by: PG

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-104
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
		Ground Surface					
0		***Sand*** Dark gray 10yr 4/1, fine grained					
		Sand White 10yr 8/1, fine grained	medium dense	4-5-7	12		
		Sand Light brown 7.5yr 6/3, fine grained	medium dense	6-8-10	18		
5			medium dense	8-9-8	17		
			medium dense	3-4-6	10		
		Sand Dark brown 10yr 3/3, fine grained					
10			loose	2-3-3	6		
15			medium dense	4-6-6	12		
		Sand Brown 10yr 5/3, fine grained					
20			medium dense	4-8-9	17		
25		***Sand*** Pale brown 10yr 6/3, fine grained	medium dense	10-10-11	21		
		End of Boring					
30							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 0.9'

Water Table: - 5.5'
Ground Elevation: 52.63'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-105
Date Drilled: 1-23-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Brown 10yr 5/3, fine grained with roots					
		Sand Pale brown 10yr 6/3, fine grained	medium dense	5-9-12	21		
		Sand Dark yellowish brown 10yr 4/4, fine grained	medium dense	5-6-6	12		
5		***Sand*** Yellowish brown 10yr 5/6, fine grained	medium dense	9-10-16	26		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	4-7-11	18		
10		***Sand*** Yellowish brown 10yr 5/6, fine grained	medium dense	7-7-9	16		
15		***Sand*** Dark brown 10yr 3/3, fine grained	loose	3-4-3	7		
20		***Sand*** Black 10yr 2/1, fine grained	loose	3-3-2	5		
25		***Sand*** Dark brown 10yr 3/3, fine grained	very dense	12-28-34	62		
		End of Boring					
30							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 1.0'

Water Table: - 5.5'
Ground Elevation: 52.63'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-106
Date Drilled: 1-24-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray 10yr 4/1, fine grained with roots					
		Sand Light gray 10yr 7/1, fine grained	medium dense	3-4-7	11		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	4-9-11	20		
5		***Sand*** Gray 10yr 5/1, fine grained	slightly loose	3-4-4	8		
		Sand Brown 10yr 5/3, fine grained	medium dense	5-6-6	12		
10		***Sand*** Yellowish brown 10yr 5/6, fine grained	slightly loose	2-3-4	7		
15		***Sand*** Brown 10yr 5/3, fine grained	slightly loose	3-3-6	9		
20		***Sand*** Dark yellowish brown 10yr 4/4, fine grained	medium dense	5-5-8	13		
25		***Sand*** Yellowish brown 10yr 5/6, fine grained	medium dense	4-4-7	11		
		End of Boring					
30							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 1.0'

Water Table: - 5.3'
Ground Elevation: 51.75'
Drilled by: JS/PR
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Pond Boring
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: PB-107
Date Drilled: 1-24-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Dark gray 10yr 4/1, fine grained with roots					
		Sand Gray 10yr 6/1, fine grained	medium dense	5-6-11	17		
		Sand Brown 10yr 5/3, fine grained	medium dense	4-5-8	13		
5		***Sand*** Yellowish brown 10yr 5/6, fine grained	slightly loose	3-4-4	8		
			medium dense	5-5-6	11		
		Sand Pale brown 10yr 6/3, fine grained					
10			slightly loose	5-4-4	8		
		Sand Dark brown 10yr 3/3, fine grained	medium dense	5-6-13	19		
15							
		Sand Dark yellowish brown 10yr 4/4, fine grained	medium dense	9-9-12	21		
20							
		Sand Brown 10yr 5/3, fine grained	medium dense	3-5-9	14		
25		End of Boring					
30							

Notes: NRCS Soil Designation: Smyrna
NRCS SHGWT= 0.0' to -1.0'
CFTL SHGWT= - 1.0'

Water Table: - 5.2'
Ground Elevation: 52.11'
Drilled by: JS/PR
Compiled by: DY

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

Outparcel Borings

Central Florida Testing Laboratories, Inc.
12625 – 40th Street North, Clearwater, FL 33762

Client: GBY, Inc.
Project: Suncoast Lakes - SR52 Commercial
Location: State Route 52 & Suncoast Parkway
City / State: Pasco County, Florida

Report No: 178339
Log of Borehole: OB-101*
Date Drilled: 11/21/05

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
		Ground Surface					
0		***Sand*** Light gray, fine grained, with small roots.					
		Sand White, fine grained, with trace small roots.	medium dense	6-8-8	16		
		Sand Light brown, fine grained.	medium dense	4-6-6	12		
5			slightly loose	3-4-5	9		
			loose	2-2-4	6		
		Sand White, fine grained.					
10			slightly loose	2-3-5	8		
		Sand Light brown, fine grained.					
15			medium dense	4-6-8	14		
		Sand Brown, fine grained.					
20		***Sand*** Light brown, fine grained.	medium dense	5-7-10	17		
		Sand Dark brown, fine grained.					
25			medium dense	4-6-8	14		
		End of Boring					
30							

Notes: ** Originally Labeled SPT-1

*Well points 60' north of boring - may affect water table.

Water Table: -7.0' bls*
Ground Elevation: 54.8'
Drilled by: AC/AJ
Compiled by: PG

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

Client: GBY, Inc.
Project: Suncoast Lakes - SR52 Commercial
Location: State Route 52 & Suncoast Parkway
City / State: Pasco County, Florida

Report No: 178339
Log of Borehole: OB-102*
Date Drilled: 11/21/05

Depth	Subsurface Profile Description	Consistency	Blow Count	N value	Lab/ Notes
0	Ground Surface				
	Sand Dark brown, fine grained.	medium dense	7-12-15	27	
	Sand Very pale brown, fine grained.				
	Sand Dark brown, fine grained.	medium dense	4-7-10	17	
5		medium dense	3-4-6	10	
	Sand Brown, fine grained.	medium dense	3-5-6	11	
10		medium dense	4-5-7	12	
15	***Sand*** Dark brown, fine grained.	loose	1-2-2	4	
20	***Sand*** Brown, fine grained.	very loose	1-1-1	2	
25	***Clayey Sand*** Light brown, fine grained.	very loose	1-1-2	3	
30	***Clayey Sand*** Brown, fine grained.	loose	2-2-2	4	
	End of Boring				
35					

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

Notes: * Originally Labeled SPT-2

Water Table: -2.0' bls
Ground Elevation: 52.6'
Drilled by: AC/AJ
Compiled by: PG

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Out Parcel
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: OB-103
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray, fine grained					
		Sand White, fine grained	medium dense	7-10-12	22		
			medium dense	6-9-8	17		
5		***Sand*** Dark brown, fine grained	slightly loose	7-4-5	9		
			medium dense	8-5-5	10		
		Sand Brown, fine grained					
10			medium dense	3-5-7	12		
		Sand Light brown, fine grained					
15			medium dense	7-7-7	14		
		Sand Dark brown, fine grained					
20			medium dense	6-7-12	19		
		Sand Brown, fine grained					
25			medium dense	4-5-8	13		
		End of Boring					
30							

Notes:

Water Table: - 4.9'
Ground Elevation: 53.46'
Drilled by: PR/MS
Compiled by: DY

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

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CENTRAL FLORIDA TESTING LABORATORIES

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Out Parcel
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: OB-104
Date Drilled: 1-24-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray, fine grained with roots					12.3% organic
		Sand Dark gray, fine grained with organics	very loose	1-0-1	1		
		Sand Yellow, fine grained	slightly loose	2-3-4	7		
5		***Sand*** Pale brown, fine grained	slightly loose	3-4-4	8		
			medium dense	4-5-6	11		
10		***Sand*** Light yellowish brown, fine grained	slightly loose	5-3-4	7		
15		***Sand*** Light brown, fine grained	medium dense	4-6-11	17		
20		***Sand*** Brown, fine grained	medium dense	6-4-12	16		
25		***Sand*** Yellowish brown, fine grained	medium dense	3-5-5	10		
		End of Boring					
30							

Notes:

Water Table: - 4.7'
Ground Elevation: 51.38'
Drilled by: JS/PR
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Out Parcel
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: OB-105
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray, fine grained with roots	medium dense	6-6-6	12		
		Sand Dark gray, fine grained	medium dense	6-6-7	13		
5			slightly loose	3-4-4	8		
			loose	1-2-2	4		
		Sand Brown, fine grained					
10			loose	2-3-3	6		
15			medium dense	3-6-8	14		
		Sand Light brown, fine grained					
20			medium dense	6-8-10	18		
		Sand Gray, fine grained					
25		***Sand*** Light brown, fine grained	medium dense	6-7-6	13		
		End of Boring					
30							

Notes:

Water Table: - 4.8'
Ground Elevation: 52.42'
Drilled by: AC/KJ
Compiled by: DY

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

Publix Borings

Central Florida Testing Laboratories, Inc.
12625 – 40th Street North, Clearwater, FL 33762

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Publix
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: XB-101
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray, fine grained with roots	medium dense	10-13-10	23		
		Sand Light brown, fine grained	loose	3-2-4	6		
5		***Sand*** Brown and dark brown, fine grained with trace organics	very loose	2-1-2	3		6.4% organic
		Sand Dark brown, fine grained with trace clay	loose	3-3-2	5		
10		***Sand*** Dark brown, fine grained	slightly loose	3-3-4	7		
15		***Sand*** Light brown, fine grained	slightly loose	3-3-5	8		
20			medium dense	4-5-6	11		
		Sand Light gray, fine grained	slightly loose	5-4-4	8		
25		End of Boring					
30							

Notes:

Water Table: - 3.7'
Ground Elevation: 50.65'
Drilled by: PR/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Publix
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: XB-104
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Dark gray, fine grained with roots	loose	1-2-2	4		
		Sand Black, fine grained with organics	very loose	1-1-1	2		11.0% organic
5			very loose	1-1-2	3		
			very loose	1-1-1	2		
		Sand Rusty brown, fine grained					
10			loose	1-1-3	4		
15		***Sand*** Brown, fine grained	medium dense	5-6-8	14		
20			medium dense	4-6-6	12		
		Sand Light brown, fine grained					
25			medium dense	4-5-6	11		
		End of Boring					
30							

Notes:

Water Table: - 1.5'
Ground Elevation: 48.45'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Publix
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: XB-105
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Lab/ Notes
0		Ground Surface				
		Organics Muck with roots				
		Sand Rusty brown, fine grianed	loose	1-2-2	4	
			slightly loose	4-4-4	8	
5		***Sand*** Black, fine grained with organics	very loose	1-1-2	3	8.1% organic
			slightly loose	2-3-4	7	
10		***Sand*** Brown, fine grained	slightly loose	2-3-5	8	
15			loose	2-3-3	6	
20		***Sand*** Dark brown, fine grained	medium dense	5-8-10	18	
25			medium dense	8-10-12	22	
		End of Boring				
30						

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

Notes:

Water Table: - 2.5'
Ground Elevation: 49.47'
Drilled by: AC/KJ
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Publix
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: XB-106
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Light gray, fine grained	loose	1-2-2	4		9.3% organic
		Sand Light gray and brown, fine grianed with organics	medium dense	2-5-6	11		
		Organics Muck	loose	4-3-2	5		
5		***Sand*** Light brown, fine grained	very loose	2-1-2	3		
			very loose	WOH+6'	0		
10		***Sand*** Dark brown, fine grained with organics	medium dense	0-5-9	14		6.5% organic
15							
20		***Sand*** Gray, fine grained	medium dense	10-8-14	22		
25			medium dense	8-12-10	22		
		End of Boring					
30							

Notes: WOH= weight of hammer

Water Table: - 5.8'
Ground Elevation: 52.34'
Drilled by: PR/MS
Compiled by: DY

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

Client: Rizk Florida JV
Project: Suncoast Lakes Commercial
Location: Publix
City / State: Pasco County, Florida

Report No: 189520
Log of Borehole: XB-107
Date Drilled: 1-29-07

Depth	Strata Symbol	Subsurface Profile Description	Consistency	Blow Count	N value	Standard Penetration Test (blows/ft) 0 20 40 60 80 100	Lab/ Notes
0		Ground Surface					
		Sand Gray, fine grained	medium dense	10-9-12	21		
		Sand Light brown, fine grained	medium dense	3-7-4	11		
5			very loose	1-1-1	2		
		Sand Dark brown, fine grained with trace clay	loose	2-3-2	5		
10			slightly loose	3-4-5	9		
15		***Sand*** Dark brown, fine grained	medium dense	5-5-8	13		
20			medium dense	3-4-6	10		
		Sand Brown, fine grained	loose	3-2-3	5		
25		End of Boring					
30							

Notes:

Water Table: - 3.8'
Ground Elevation: 50.91'
Drilled by: PR/MS
Compiled by: DY

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

SITE PHOTOGRAPHS

Central Florida Testing Laboratories, Inc.
12625 – 40th Street North, Clearwater, FL 33762