MANATEE COUNTY
FLORIDA

August 12, 2011

TO: All Interested Bidders

SUBJECT: **Invitation for Bid # 11-1653-DC**
HABITAT RESTORATION @ BENNETT PARK

ADDENDUM # 2

Bidders are hereby notified that this Addendum shall be acknowledged on pages 00300-1 of the Bid Form and made a part of the above named bidding and contract documents.

The following items are issued to add to, modify, and clarify the bid and contract documents. These items shall have the same force and effect as the original bidding and contract documents, and cost involved shall be included in the bid prices. Bids to be submitted on the specified bid date, shall conform to the additions and revisions listed herein.

The deadline for clarification of questions was **August 12, 2011 at 1:00 pm.** This deadline had been established to maintain fair treatment of all potential bidders, while maintaining the expedited nature of the Economic Stimulus that the contracting of this work may achieve. Questions received after this date and time may not be considered.

A public records request was made for the engineer's estimate for this project.

The engineer does not have an opinion of cost for construction of this Phase.

A public request was made for the Non Mandatory Information Conference sign in sheet.

Attached is a copy of the Non-Mandatory Information Conference sign in sheet dated August 9, 2011 (1 page)

Finance Management Department
Mailing Address: Purchasing Division: 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205
PHONE: 941-749-3045 * FAX: 941-749-3034
www.mymanatee.org

August 15, 2011
All Interested Bidders
ADDENDUM # 2
Invitation for Bid # 11-1653-DC
HABITAT RESTORATION @ BENNETT PARK

The responses to the submitted questions have been provided by Mr. Daniel Bond, P.E. of Wilson Miller/Stantec.

Attachment: Letter dated August 11, 2011 (2 pages)

The responses to the submitted questions have been provided by Mr. Tom Yarger, Construction Services Project Manager, Property Management, Manatee County Government. Note Question 3: (electronic file not attached) – A hard copy of the file (2 pages) is attached.

If you have submitted a bid prior to receiving this addendum, you may request in writing that your original, sealed bid be returned to your firm. All sealed bids received will be opened on the date stated.

The deadline for submitting sealed Bids at the Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205 is until 3:00 pm on August 19, 2011.

Sincerely,

Deborah Carey-Reed
Contract Specialist

/ds
Attachments

MEMORANDUM

PROPERTY MANAGEMENT
Construction Services Division
P.O. Box 1000
1112 Manatee Avenue West
Bradenton, FL 34206

MANATEE COUNTY
FLORIDA

Phone: 941-749-3003
Fax: 941-749-3018
www.mymanatee.org

To: Donna Stevens, Construction Buyer, Purchasing

From: Tom Yarger, Construction Services Manager TY

Date: August 12, 2011

Subject: Bennett Park Restoration

Responses to contractor questions are provided as follows:

Question 1:
Would an Underground Utility and Excavation License be acceptable in lieu of a General Contractors License?
Answer:
No. A General Contractors License is more specific to the type of specialized restoration and grading work associated with this project.

Question 2:
Verify the warranty period for the project (one year versus 3 years).
Answer:
The warranty period is for one year, as provided in the Contract Documents.

Question 3:
A request was made for as-builts showing the existing grade elevations within the wetland creation areas.
Answer:
An electronic copy of the as-builts will be made available to each bidder.

Question 4:
Where will the stockpile location be located within the site?
Answer:
The stockpile location will be coordinated with the selected contractor to be as close to the excavation area as possible. There could be more than one area identified.

Please contact me if you need additional information.

WilsonMiller

Stantec

6900 Professional Parkway East
Sarasota, FL 34240
Tel: (941) 907-6900

Sent Via E-mail: donna.stevens@mymanatee.org

August 11, 2011

File: 215510297 / 210

Manatee County Financial Management Department
Purchasing Division
1112 Manatee Avenue West, Suite 803
Bradenton, FL 34205

Attention: **Donna Stevens, Contract Specialist**

Dear Ms. Stevens:

Reference: **Habitat Restoration @ Bennett Park**
Invitation for Bid (IFB) #11-1653DC
Addendum #1

As requested, please see below for our responses to the questions received from the contractors and clarifications regarding the subject project:

Contractor Questions/Requests:

1. Request was made for the attendance record at the pre-bid meeting.

   Response: This item to be addressed by Manatee County.

2. Would an Underground Utility and Excavation License be acceptable in lieu of a General Contractor's license?

   Response: This item to be addressed by Manatee County.

3. Verify warranty period for the project (1 year versus 3 years).

   Response: This item to be addressed by Manatee County.

4. Request was made for as-builts showing the existing grade elevations within the wetland creation areas.

   Response: This item to be addressed by Manatee County.

5. Request was made for a copy of the previous geotechnical report prepared for the project.

   Response: Please see the attached copy of the Geotechnical Exploration report prepared by Universal Engineering Sciences, Inc. dated May 21, 2009.

6. Where will the stockpile location be located within the site?

   Response: This item to be addressed by Manatee County.

WilsonMiller

Stantec

6900 Professional Parkway East
Sarasota, FL 34240
Tel: (941) 907-6900

7. Will an optional bid item be provided in case off-site removal of materials is required (if burning is not allowed)?

   Response: Please see the attached revised Bid Forms for Phase I and Phase II which now include an optional bid item for the off-site disposal of material to the landfill. Prior to any authorization of off-site disposal by the County, the Contractor shall demonstrate that they have made every effort to burn materials on-site. If off-site removal is authorized by the County, the Contractor shall submit the tipping fees/tickets from the landfill as supporting documentation with each pay application submittal.

8. Is it necessary to follow the planting guidelines detailed on pages 26 and 27 (D.1.7.4) requiring fertilizer and a planting hole 1.5 times the diameter of the tree rootball or container?

   Response: Yes, the Contractor shall follow the planting guidelines as specified.

Additional Clarifications:

For Section D.1.7.9 - Wetland Maintenance Period, the language shall be revised as follows:

The Contractor shall guarantee the survival of at least 90 percent of all plant materials for a minimum of 1 year, not 90 days.

Sincerely,

WilsonMiller Stantec

Daniel J. Bond, P.E.
Senior Project Manager
Ph: (941) 907-6900 x244
Fx: (941) 907-6910
dan.bond@stantec.com

Enclosures: As Noted

INFORMATION CONFERENCE: INVITATION FOR BID

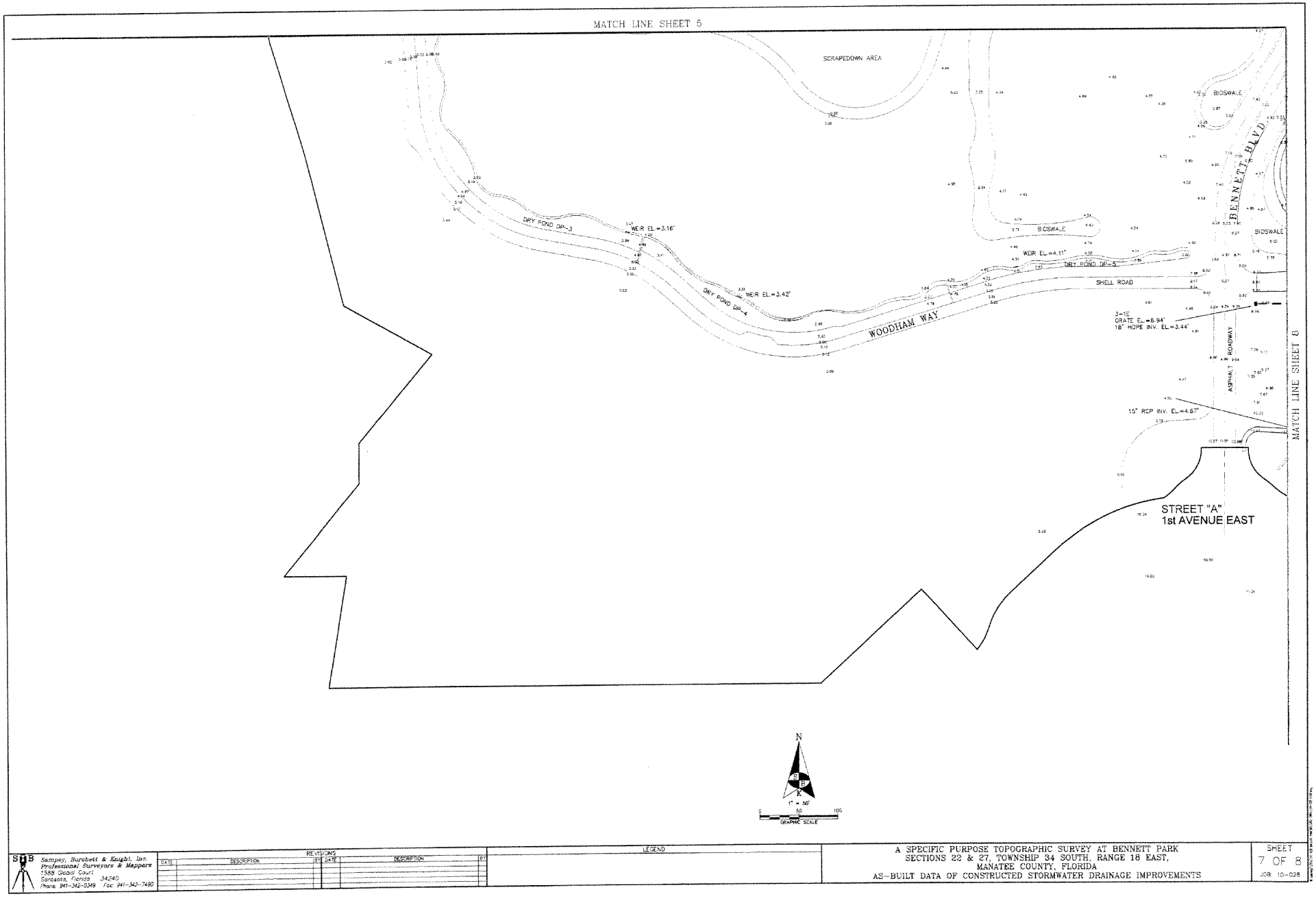
IFB #11-1653DC HABITAT RESTORATION @ BENNETT PARK

DATE: AUGUST 9, 2011 TIME: 10:00 AM @ PURCHASING

TELEPHONE/ FAX/ EMAIL	NAME (PLEASE PRINT)	COMPANY NAME
941-749-3045 ph 941-749-3084 fx donna.stevens@mymanatee.org	Donna M Stevens	MCG
863-804-0044 PH 863-804-0055 RHEDRICK2@BULHED.COM	Ronnie Hedrick II	Bul-Hed Corporation
941-751-3900 941-751-3949 thomsonr@gatorgap.com	Robert Thomson	Gator Grading & Paving
239 597 0093 fax 239 597 0095 Richards Company.Net	Chris Featherstone	Richards CO DBA 3RS
941 539 5992 941 538 3501 Contz@crosscreekenvironmental.com	Contz Grosse	Crosscreek Environmental
772-528-5033 772-467-9226 sales@dgcenvironmental.com	Patrick Mashburn	DGC Environmental Services, Inc.
941-358-8343 941-358-8395 johncannon@earthlink.net	John Cannon	Landmark Service
941-756-1871 941-755-1379 dennis@woodruffandsons.com	Dennis J. Holt	Woodruff & Sons Inc.
813-927-5629 cell 813 623-1607 Fax KHawkins@seamyassociates.com	Kenny Hawkins	Seamy & Associates, Inc
305-670-9660 OFFICE 305-670-9659 FAX JACKIE@IFCOP.COM	MIKE WILKINS	OKLAWAHA FARMS INC
(941) 722-0901 (941) 722-4931 ahoffner@ecoconsultants.net	Alec Hoffner	E Co Consultants, Inc
941-722-0901 941-722-4931 dadkins@ecoconsultants.net	Don Adkins	E Co Consultants, Inc
941-232-9377 941-322-2397 eddie@mckeithen.net	Eddie McKeithen	McKeithen Grower's, Inc. Wholesale Native Trees
239-567 1857 (T) 239-567 0932 (F) David.quinlan@woodsandwetlands.com	DAVID QUINLAN	Woods and Wetlands In

TELEPHONE/ FAX/ EMAIL	NAME (PLEASE PRINT)	COMPANY NAME
239-567-1857 Ph. 239-567-0932 FAX Pat.Summerall@woodsandwetlandsinc.com	PAT Summerall	WOODS AND WETLANDS
941-840-3115 Joseph.elminc@gmail.com	JOSEPH PETERSEN	ELM ENVIRONMENTAL INC.
941-747-9888 cwetlands@verizon.net	Jim Henslick	CREATIVE WETLANDS, INC
941-426-7878 WaltHimyer@earthbalance.com	Wade Waltimyer	EarthBalance
941-748-5030 Olivebranchfl@yahoo.com	Luke Davis / Rob Prine	Olivebranch Enterprises Inc
JOHN ROWLAND		MCO
tom Yarger	THOMAS YARGER	MC PROP MGMT.
1-941-721-7711 PHONE DAN HARTE tcsgc@verizon.net 1-941-721-7733 FAX	Dan Harte	TCS INC
~~4th~~ 941 907. 6900 6910 MIKE.BURTON@STANTEC.COM	MIKE BURTON	STANTEC
941.907.6900 941.907.6910 dan.bond@stantec.com	Dan Bond	Stantec
941-907-6900 941-907-6910 fx mike.bell@stantec.com	Mike Bell	Stantec
813 323 3336 813 634 1733 FAX Jrodi@QGSDevelopment.com	Joe Rodi	QGS Development
941-953-4500 941-953-4700 cfunk@holland-corp.com	CHUCK FUNK	HOLLAND CONSTRUCTION
941 907 6900 damon.moore@stantec.com	DAMON MOORE	Stantec

PURCHASING
2011 AUG 9 AM 10 00
MANATEE COUNTY



Sampey, Burchett & Knight, Inc.
Professional Surveyors & Mappers
1588 Good Court
Sarasota, Florida 34240
Phone 941-342-0349 Fax 941-342-7490

REVISIONS

DATE	DESCRIPTION	BY	DATE	DESCRIPTION	BY

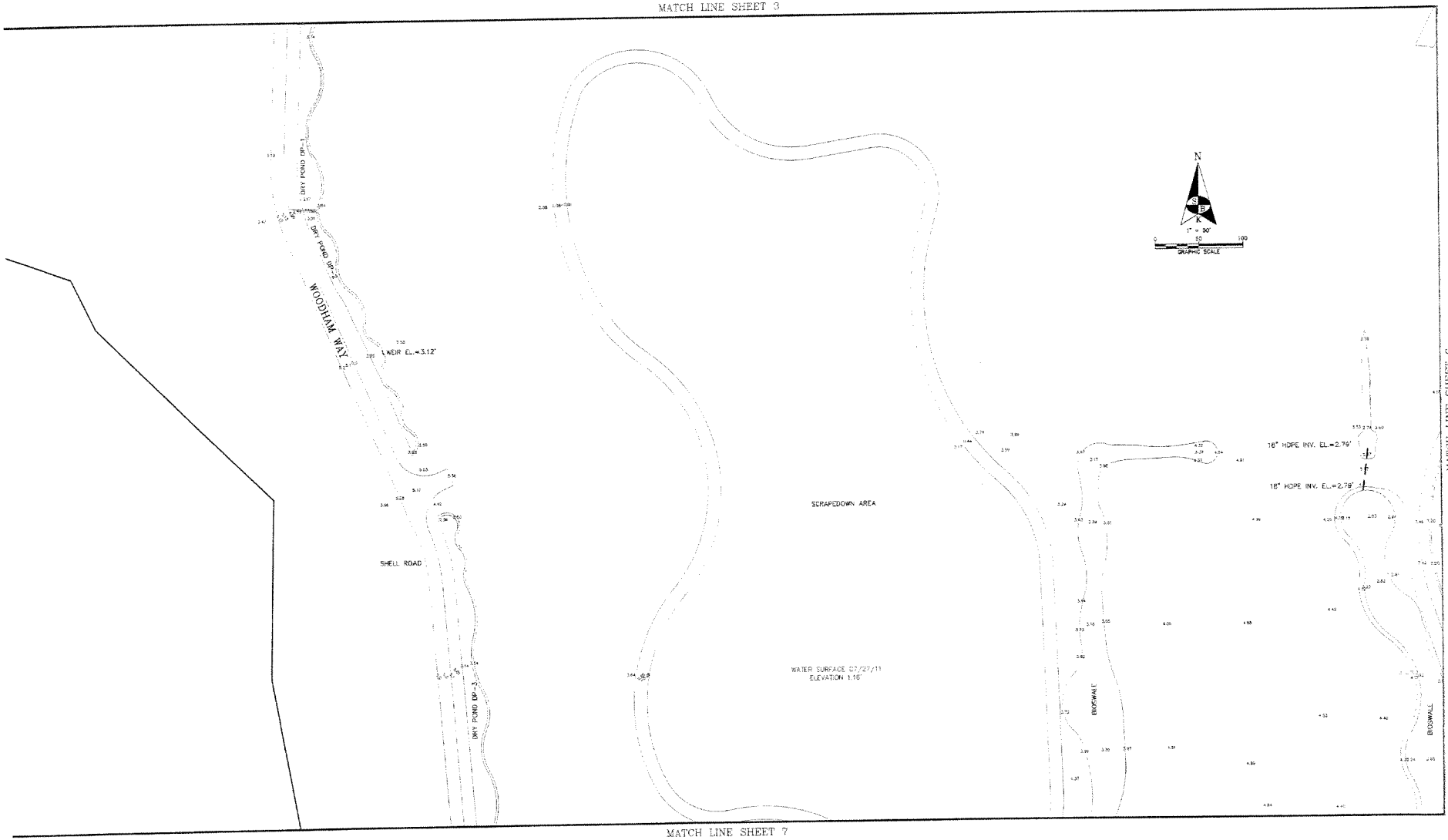
LEGEND

A SPECIFIC PURPOSE TOPOGRAPHIC SURVEY AT BENNETT PARK
SECTIONS 22 & 27, TOWNSHIP 34 SOUTH, RANGE 18 EAST,
MANATEE COUNTY, FLORIDA
AS-BUILT DATA OF CONSTRUCTED STORMWATER DRAINAGE IMPROVEMENTS

SHEET 7 OF 8
JOB 10-028

Bennett Park
Addendum 2

MATCH LINE SHEET 3



MATCH LINE SHEET 6

MATCH LINE SHEET 7

Bennett Park Addition 2

Sampey, Burchett & Knight, Inc.
Professional Surveyors & Mappers
1328 Grabel Court
Sarasota, Florida 34240
Phone: 941-342-0349 Fax: 941-342-7490

REVISIONS					
DATE	DESCRIPTION	BY	DATE	DESCRIPTION	BY

LEGEND

A SPECIFIC PURPOSE TOPOGRAPHIC SURVEY AT BENNETT PARK
SECTIONS 22 & 27, TOWNSHIP 34 SOUTH, RANGE 18 EAST,
MANATEE COUNTY, FLORIDA
AS-BUILT DATA OF CONSTRUCTED STORMWATER DRAINAGE IMPROVEMENTS

SHEET 5 OF 8
JOB: 10-028

UNIVERSAL
ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION

BENNETT PARK HABITAT RESTORATION
KAY ROAD
MANATEE COUNTY FLORIDA

PROJECT NO. 1130.0900020
REPORT NO. 9100

Prepared For:

WilsonMiller
6900 Professional Parkway East
Sarasota, FL 34240

Prepared By:

Universal Engineering Sciences, Inc.
1748 Independence Boulevard, Ste. B-1
Sarasota, FL 34234
(941) 358-7410

May 21, 2009

UNIVERSAL
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Consultants In: Geotechnical Engineering • Environmental Sciences
• Construction Materials Testing • Private Provider & Threshold Inspections

OFFICES IN:
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May 21, 2009

WilsonMiller
6900 Professional Parkway East
Sarasota, FL 34240

Attention: Mr. Daniel Bond, P. E.

Reference: **GEOTECHNICAL EXPLORATION**
BENNETT PARK HABITAT RESTORATION
Kay Road
Manatee County, Florida
Project No. 1130.0900020
Report No. 9100

Dear Mr. Bond:

Universal Engineering Sciences, Inc. has completed the subsurface exploration for the above referenced project. This report contains the results of our explorations, an engineering interpretation of these with respect to the project characteristics described to us, and recommendations for seasonal high groundwater levels.

We appreciate the opportunity to provide our geotechnical engineering services on this project and look forward to a continued association. If additional exploration, analysis, and / or recommendations are desired or whether you have questions concerning this report, please let us know. Furthermore, we can provide quality assurance testing and inspection during construction.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization Number No. 549

Robert Gomez, P.E. #58348
Branch Manager

RG/aj:

1748 Independence Blvd., Suite B-1 • Sarasota, FL 34234 • (941) 358-7410

TABLE OF CONTENTS

LIST OF APPENDICES

Section

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of the subsurface exploration of the proposed Bennett Park Habitat Restoration project located at the southwest quadrant of I-75 and Kay Road in Manatee County, Florida. A general location plan of the project area appears in Appendix A: Site Location Plan. We divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- SUMMARY - Reviews the material in this report
- APPENDICES - Presents support materials referenced in this report.

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

The project consists of a stormwater management plan for the proposed Bennett Park. An aerial map was provided by WilsonMiller with the desired boring locations for our seasonal high groundwater evaluation.

Our recommendations are based upon the above considerations. If any of this information is incorrect or if you anticipate any changes, inform Universal Engineering Sciences so that we may review our recommendations.

2.2 PURPOSE

The purposes of this exploration were:

- to explore the general subsurface conditions at the site;
- to interpret and review the subsurface conditions with respect to the proposed construction; and
- to provide geotechnical engineering recommendations for seasonal high groundwater level

Recommendations concerning other soil related considerations were beyond the scope of our exploration. This report presents and evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, if you so desire.

2.3 FIELD EXPLORATION

The shallow subsurface conditions were explored with ten (10) hand auger soil borings across the site. These borings were performed according to the procedures of ASTM D 1452 by manually advancing a bucket auger into the soil to the required depth. We evaluated the soil type by visually inspecting the cutting recovered from the bucket auger as it periodically removed and emptied of soil.

The soil borings were located and field staked by the project surveyor. The test boring locations are shown on the attached Boring Location Plan in Appendix B.

2.4 LABORATORY TESTING

The soil samples recovered from the soil test borings were returned to our laboratory, where a member of our geotechnical staff visually examined and reviewed the field descriptions. We selected eleven (11) soil samples for percent fines test (200 wash) and natural moisture content test. The lab tests were performed to aid in the soil description, characteristics and classifications of the soils encountered. The results are included in Appendix B of this report.

3.0 FINDINGS

3.1 SURFACE CONDITIONS

A Universal Engineering Sciences representative performed a visual site inspection of the subject property to gain a "hands-on" familiarity with the project area. The site is covered with grass and trees and is moderately wooded. The site consists of several existing retention ponds and wetland areas. Based on the topographic information provided to us, existing elevation ranges between +2.82 to +9.10 feet NGVD at the boring locations.

3.2 SOIL SURVEY

Based on the Manatee County Soil Survey as prepared by the US Department of Agriculture Soil Conservation Service, the predominant soil type at the site where the borings were performed is identified as Wabasso (#48). The Manatee County SCS indicates that this soil type has a seasonal high water level of 0-1 foot. It should be noted that we performed site specific SHGWL determination at each boring location as described in section 4.2 of this report.

3.3 SUBSURFACE CONDITIONS

The boring locations and detailed subsurface conditions are illustrated in Appendix B: Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. Also, see Appendix B: Soils Classification Chart, for further explanation of the symbols and placement of data on the Boring Logs.

TABLE 2
General Soil Profile

Typical depth (ft)		Soil Descriptions
From	To	
0	1.5 to 2.0	Gray, dark gray and brown fine sand and fine sand with trace silt (SP, SP-SM)
1.5 to 2.0	3.0	Gray and brown fine sand and silty sand (SP, SM)
3.0	7.0*	Gray and brown clayey sand and silty fine sand with trace of cap-rock and rock fragments (SC, SM)

* **Termination Depth of Deepest Boring**
() **Bracketed Text Indicates: Unified Soil Classification**

Variations in the depth, thickness, and consistency of the aforementioned soil strata occurred at the individual test boring locations. A notable feature was the presence of cap-rock encountered at 2 to 3.5 feet in borings SB-5, SB-7 and SB-8. The groundwater level was recorded at a depth of 3.42 to 7.0 feet below existing grade at the time of our exploration. The apparent water table can be expected to fluctuate with seasonal rainfall.

4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon a review of the attached soil test data, and our experience with similar projects and subsurface conditions. If the changes are different from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes.

Additionally, if shallow subsurface conditions are encountered during construction which was not encountered in the borings, report those conditions immediately to us for observation and recommendations.

In this section of the report, we present our detailed recommendations for groundwater control and seasonal high groundwater evaluation.

4.2 GROUNDWATER CONSIDERATIONS

The groundwater table will fluctuate seasonally depending upon local rainfall. The normal seasonal high groundwater level typically occurs in the August-September period at the end of the rainy season. The seasonal high groundwater level is affected by a number of factors, such as drainage characteristics of the soils; land surface elevation, relief points (i.e. drainage ditches, lakes, rivers, swampy areas) and distance to relief points.

Several other factors influence the determination of the seasonal high groundwater level (SHGWL). When soils are subjected to alternating cycles of saturation and drying, discoloration or staining that is not part of the dominant soil color occurs. This is called mottling, and manifests itself in various shades of gray, brown, red or yellow. There are numerous processes that lead to this discoloration, including mineral accretions, oxidation, and bacteria growth within the soil. The presence of this discoloration indicates that groundwater has, at some point in time, reached that elevation and remained there long enough to cause any or all of these processes to occur. The SHGWL elevation is assumed to be the highest point at which mottling is observed regardless of whether water is present at the time of observation. This estimate is independent of the actual location of the groundwater table.

Based upon our visual inspection of the recovered soil samples, review of information obtained from the USDA soil survey of Manatee County, existing site conditions and our knowledge of local and regional hydrology, our best estimate is that the seasonal high groundwater level could be on the order of 1.34 to 2.16 feet below the existing grade at the testing boring locations, on average. A table is included in Appendix B of this report with the SHGWL and exisiting elevations for each boring locatoin. Water could be temporarily ponded in the ditches and other low lying areas of the overall site especially during periods of heavy rainfall.

It should be noted that the estimated seasonal high water levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should the impediments to surface water drainage be present, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels may exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An Association of Engineering Firms Practicing in the Geosciences (ASFE) publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix C, and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix C: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

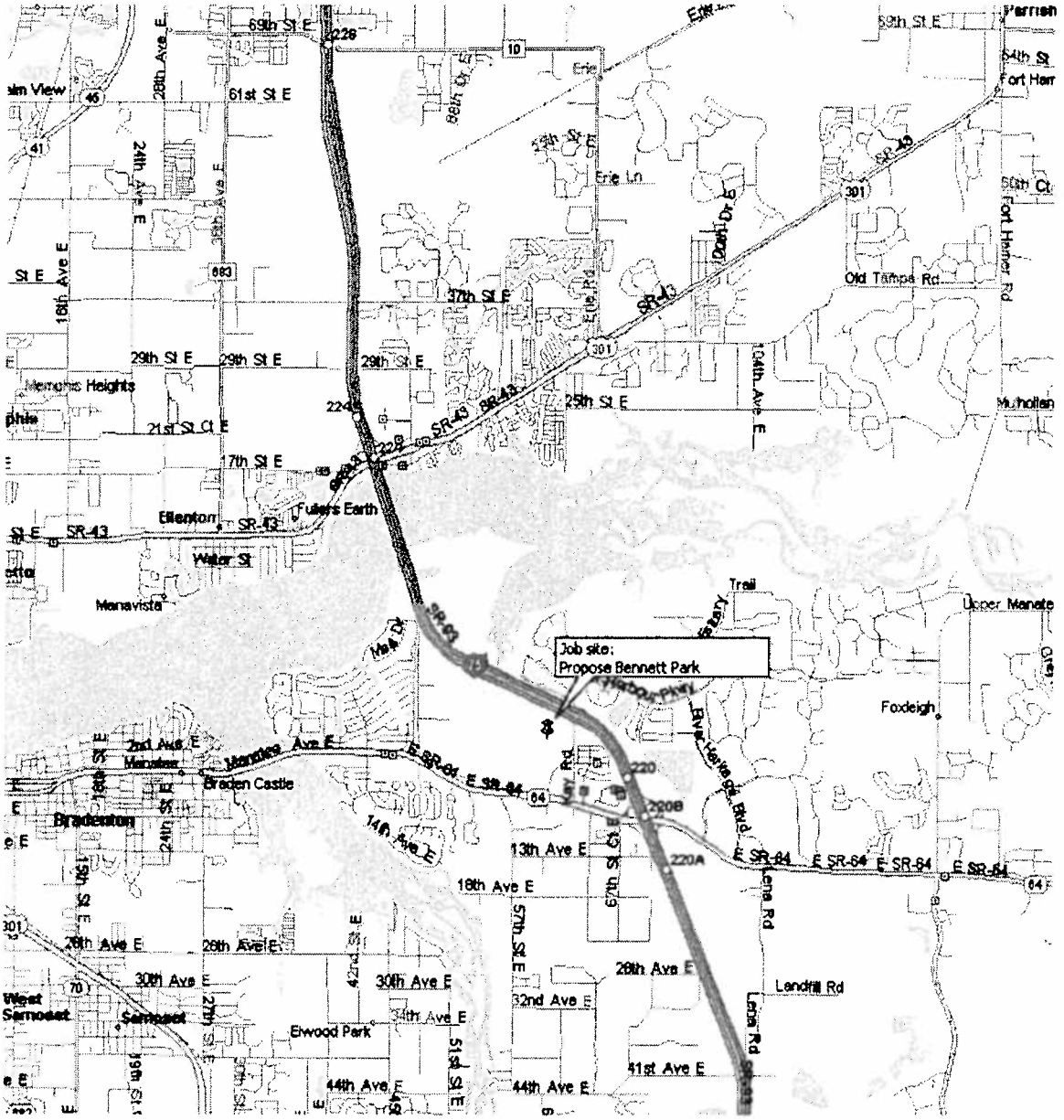
6.0 SUMMARY

In summary, we have performed field and laboratory exploration to provide geotechnical engineering recommendations for groundwater consideration and seasonal high groundwater levels.

The soils encountered generally consist of fine sand and fine sand with trace silt from existing grade to a depth of 3 feet. Below and extending to 7 feet, fine sand and fine sand with silt and clayey sand with trace of cap-rock were encountered. We encountered groundwater at a depth of 3.42 to 7.0 feet below existing grade at the time of our exploration.

Our best estimate is the seasonal high groundwater table would be 1.34 to 2.16 feet below the average existing site grades. Water could be temporarily ponded in the ditches and other low lying areas of the overall site especially during periods of heavy rainfall.

We hope this report meets your needs and discusses the issues associated with the proposed development. We would be pleased to meet with you and discuss any geotechnical engineering aspects of the project.

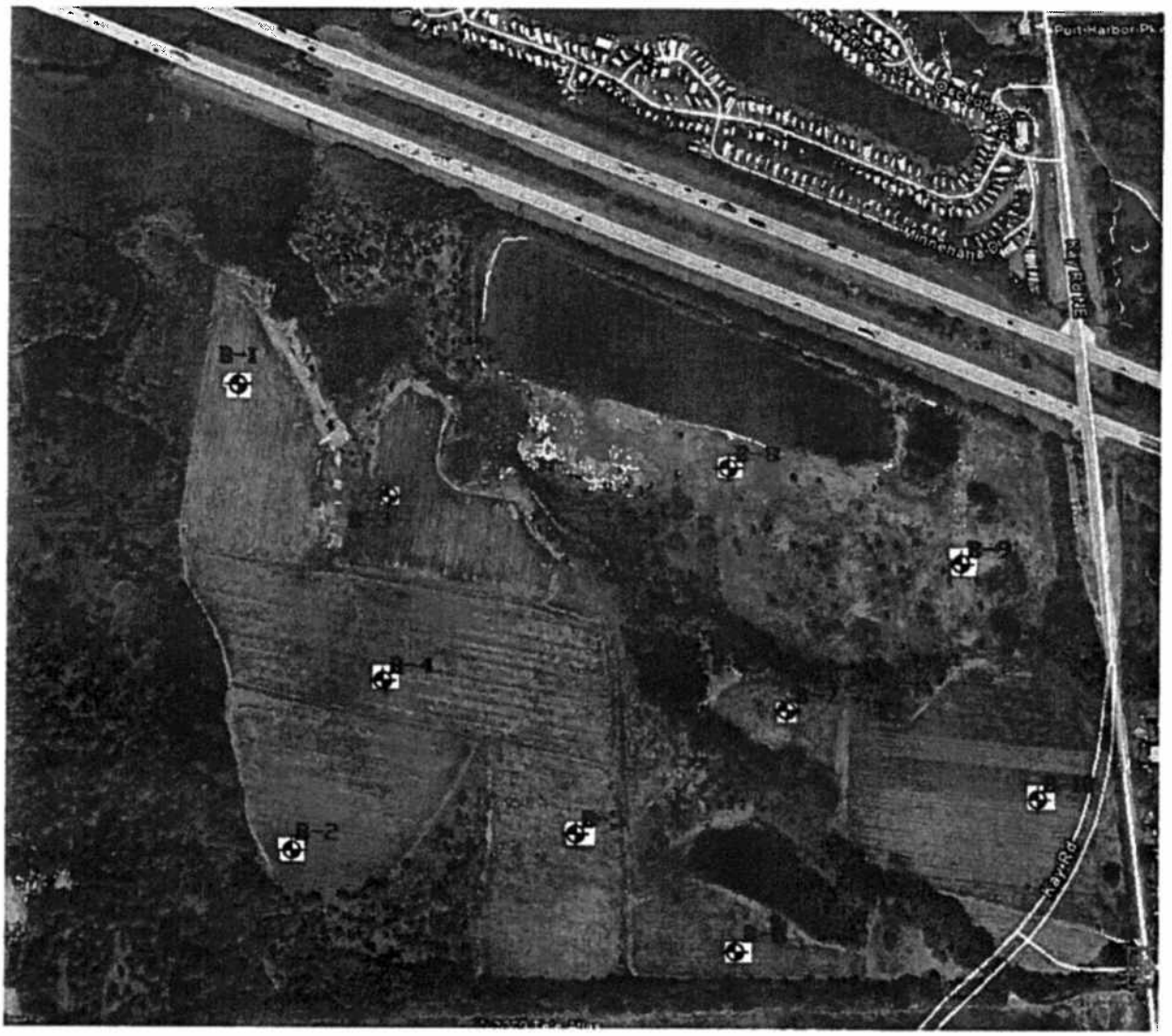


UNIVERSAL
ENGINEERING SCIENCES

BENNETT PARK
MANATEE COUNTY
BRADENTON, FLORIDA

SITE LOCATION PLAN

DRAWN BY: S.C	DATE: MAY. 2009	CHECKED BY: R.G	DATE: APRIL. 2009
SCALE: NOT TO SCALE	PROJECT NO: 1130.0900020.0000	REPORT NO: 9103	APPENDIX:



UNIVERSAL
ENGINEERING SCIENCES

BENNETT PARK
MANATEE COUNTY
BRADENTON, FLORIDA

BORING LOCATION PLAN

DRAWN BY: S.C	DATE: APRIL. 2009	CHECKED BY: R.G	DATE: APRIL. 2009
SCALE: NOT TO SCALE	PROJECT NO: 1130.0900020.0000	REPORT NO: 9103	APPENDIX:

UNIVERSAL ENGINEERING SCIENCES
Consultants In: Geotechnical Engineering-Environmental Engineering
Construction Materials Testing-Threshold Inspection

1748 Independence Boulevard, Suite B-1 - Sarasota, FL 34234 - Ph: 941-358-7410, Fx: 941-358-7353

BORING DATA FOR BENNETT PARK
Kay Road
Manatee County, Florida

Boring No.	Groundwater Depth Measured (feet)	Existing Grade Elevation (feet-NGVD)	Estimated Seasonal High Groundwater Level (SHGWL) (feet)	SHGWL Elevation (feet-NGVD)
SB1	3.70	3.14	2.0	1.14
SB2	4.45	3.08	2.16	0.92
SB3	5.50	2.82	2.0	0.82
SB4	NE	3.36	2.16	1.19
SB5	caprock @ 21" – NE	4.70	1.5	3.2
SB6	3.42	6.30	1.34	4.96
SB7	caprock @ 3.5ft– NE	6.04	1.5	4.54
SB8	caprock @ 3.2ft– NE	4.50	1.5	3.0
SB9	7.0	8.34	1.5	6.84
SB10	4.08	9.10	2.0	7.1

Notes:

1. Existing ground elevations provided by surveyor on field boring staking
2. NE: Not Encountered
3. Borings 5, 7 and 8 encountered cap-rock (limestone) and hand auger refusal
4. SHGWL based on site specific soils encountered-soil indicators

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
REPORT NO.:	9103
PAGE:	1

PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 3.14 DATE STARTED: 5/11/09
WATER TABLE (ft): 3.58 DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 2.0 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Gray fine sand (SP)						
						Dark gray fine sand (SP)						
						Gray fine sand (SP)						
				▽		Gray fine sand rusting mottling (SP)						
						Very dark gray fine sand (SP-SM)						
							14	24				
				▼		Very dark grayish brown clayey sand with trace roots (SC-SM)						
						Dark olive gray clay with trace of silt (CL-ML)						
5												
10												

QALL BENNETT PARK.GPJ UNIENGSC.GDT 5/21/09

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
REPORT NO.:	9103
PAGE:	2

PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 3.08 DATE STARTED: 5/12/09
WATER TABLE (ft): 4.5 DATE FINISHED: 5/12/09
DATE OF READING: 5-12-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 2.17 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Light gray fine sand with trace roots (SP)						
						Very dark gray silty sand (SM)						
				▽		Brown silty sand with trace of clay rusting mottling (SM-SC)	18.6	33				
						Dark yellowish brown clay with trace of silt (CL-ML)						
				▼		Light olive gray silty sand with trace clay cape rock (ML-CL)						
5												
10												

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-3** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 2.82 DATE STARTED: 5/12/09
WATER TABLE (ft): 3.5 DATE FINISHED: 5/12/09
DATE OF READING: 5-12-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 2 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Very dark gray fine sand with trace of silt (SP-SM)						
						Gray fine sand (SP)						
				▽		Gray fine sand (SP)						
						Very dark brown fine sand (SP-SM)	4	17				
						Very dark brown clayey sand with trace of silt (SC-SM)						
				▼		Very dark grayish clayey sand / olive gray clay (SC/CL)	23.9	64				
						Olive gray clayey sand with trace of silt and trace roots (SC-SM)						
						Olive gray clayey sand with trace of silt and trace rock and shell (SC-SM)						
5												
10												

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-4** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 3.36 DATE STARTED: 5/12/09
WATER TABLE (ft): N.E DATE FINISHED: 5/12/09
DATE OF READING: 5-12-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 2.16 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT. (%)
0						Gray fine sand with trace of roots (SP)						
						Light gray fine sand (SP)						
						Brown fine sand with trace of silt (SP-SM)						
				▽		Very dark grayish brown clayey sand with trace roots and trace rock (SC)						
						Dark greenish gray clay and silty sand (CL/SM)						
5						Lihght gray / dark greenish cement silt with trace clay	24.4	24.6				
10												

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

BORING DESIGNATION: **SB-5** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft): 4.70 DATE STARTED: 5/11/09
WATER TABLE (ft): N.E DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 1.5 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Dark gray fine sand (SP)						
						Light brownish gray fine sand (SP)						
				▽		Gray silty sand with trace of shell fragments (SM)						
						Cap rock (limestone) refusal hand auger						
5												
10												

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-6** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 6.30 DATE STARTED: 5/11/09
WATER TABLE (ft): 3.4 DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 1.3 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Dark gray fine sand with trace of silt (SP-SM)						
						Gray fine sand with trace of silt (SP-SM)						
				▽		Dark yellowish brown fine sand with trace of silt (SP-SM)						
						Dark grayish brown fine sand with trace silt (SP-SM)						
						Dark grayish brown silty sand (SM)	11.2	20.2				
				▼		Grayish brown clayey sand with trace of silt and shell fragments (SC-SM)						
5												
10												

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-7** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 6.04 DATE STARTED: 5/11/09
WATER TABLE (ft): N.E DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 1.5 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Gray fine sand (SP)						
						Brown fine sand with trace of silt (SP-SM)						
				▽		Light brown fine sand with trace of silt (SP-SM)						
						Yellowish brown clayey sand (SC)	7.2	9				
						Yellowish brown silty sand with trace clay (SM-SC)						
						Yellowish brown silty sand with shell fragments (SM)	17	18				
						Cap rock (limestone) hand auger refusal at 42"						
5												
10												

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

BORING DESIGNATION: **SB-8** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft): 4.50 DATE STARTED: 5/11/09
WATER TABLE (ft): N.E DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 1.5 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Light brown fine and (SP)						
						Brown silty sand with trace shell fragments (SM)	12.9	5.8				
				▽		Yellowish brown silty sand with trace of shell fragments (SM)						
						Yellowish brown silty sand (SM)						
						Dark brown fine sand with trace of silt / clayey sand (SP-SM / SC)	10.5	10				
						Light brown orange fine sand with trace of silt and trace shellrock (SP-SM)						
						Light brown fine sand with trace of silt and trace shellrock (SP-SM)						
						Cap rock (limestone) hand auger refusal at 38"						
5												
10												

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	1130.0900020.0000
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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-9** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 8.34
WATER TABLE (ft): 7
DATE OF READING: 5-11-09
EST. W.S.W.T. (ft): 2

DATE STARTED: 5/11/09
DATE FINISHED: 5/11/09
DRILLED BY: BG/RT
TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Gray fine sand (SP)						
				▽		Yellowish brown fine sand (SP)						
						Dark grayish brown clayey sand (SC)						
						Dark grayish brown with cemented clay (SC)						
5						Moist gray fine sand with trace of silt (SP-SM)						
				▼		Gray clayey sand with trace of roots /shell fragments (SC)						
10												

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BORING LOG

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PROJECT: Bennett Park
Manatee County
Bradenton, Fl

BORING DESIGNATION: **SB-10** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: Wilson Miller

LOCATION: See boring location plan

REMARKS:

G.S. ELEVATION (ft): 9.10 DATE STARTED: 5/11/09
WATER TABLE (ft): 4.1 DATE FINISHED: 5/11/09
DATE OF READING: 5-11-09 DRILLED BY: BG/RT
EST. W.S.W.T. (ft): 2 TYPE OF SAMPLING: ASTM 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT. (%)
0						Gray fine sand with trace roots (SP)						
				▽		Brown fine sand witn trace of silt (SP-SM)						
						Very dark brown clayey sand (SC)						
						Dark yellowish brown clayey sand with trace of silt (SC-SM)	20.5	22.1.				
				▼		Light yellowish brown fine sand with shell fragments and yellowish brown clayey sand (SP / SC)						
5												
10												

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SUMMARY OF LABORATORY RESULTS

Project: Bennett Park
Manatee County
Bradenton, Florida

Project No.: 1130.0900020.0000

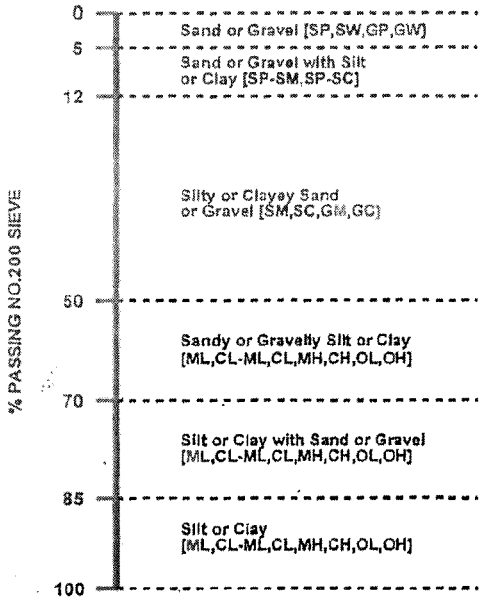
Client: Wilson Miller

Report No.: 9103

Boring No.	Sample No.	Sample Description	No. 200, %	Water Content, %	LL	PL	PI	USCS Classification	Sampling Method (ASTM)
SB - 1	5	Very dark gray fine sand (SP-SM)	14.0	24.0				SP-SM	D-1452
SB-2	2	Very dark gray silty sand (SM)	18.5	33.0				SM	D-1452
SB-3	3	Gray fine sand (SP)	4.0	17.0				SP	D-1452
SB-3	5	Very dark brown clayey sand with trace of silt (SC-SM)	23.9	64.0				SC-SM	D-1452
SB-4	4	Very dark grayish brown clayey sand with trace roots and trace rock (SC)	24.4	24.6				SC-SM	D-1452
SB-6	4	Dark grayish brown fine sand with trace silt (SP-SM)	11.2	20.2				SP-SM	D-1452
SB-7	3	Light brown fine sand with trace of silt (SP-SM)	7.2	9.0				SP-SM	D-1452
SB-7	4	Yellowish brown clayey sand (SC)	17.0	18.0				SC	D-1452
SB-8	2	Brown silty sand with trace shell fragments (SM)	12.9	5.8				SM	D-1452
SB-8	5	Dark brown fine sand with trace of silt / clayey sand (SP-SM / SC)	10.5	10.0				SP-SM/SC	D-1452
SB-10	3	Very dark brown clayey sand (SC)	20.5	22.1				SC	D-1452

KEY TO BORING LOGS

SOIL CLASSIFICATION CHART*



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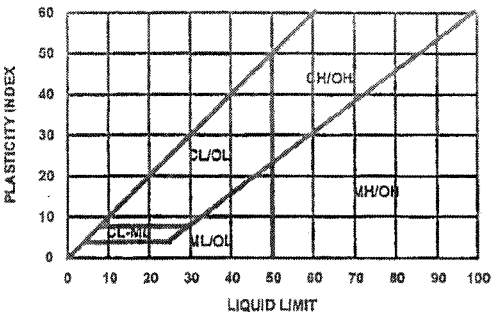

PLASTICITY CHART

GROUP NAME AND SYMBOL

COARSE GRAINED SOILS

- WELL-GRADED SANDS [SW]
- POORLY-GRADED SANDS [SP]
- POORLY-GRADED SANDS WITH SILT [SP-SM]
- POORLY-GRADED SANDS WITH CLAY [SP-SC]
- SILTY SANDS [SM]
- CLAYEY SANDS [SC]
- SILTY CLAYEY SANDS [SC-SM]
- WELL-GRADED GRAVELS [GW]
- POORLY-GRADED GRAVELS [GP]
- POORLY-GRADED GRAVELS WITH SILT [GP-GM]
- POORLY-GRADED GRAVELS WITH CLAY [GP-GC]
- SILTY GRAVELS [GM]
- CLAYEY GRAVELS [GC]

FINE GRAINED SOILS

- INORGANIC SILTS SLIGHT PLASTICITY [ML]
- INORGANIC SILTY CLAY LOW PLASTICITY [CL-ML]
- INORGANIC CLAYS LOW TO MEDIUM PLASTICITY [CL]
- INORGANIC SILTS HIGH PLASTICITY [MH]
- INORGANIC CLAYS HIGH PLASTICITY [CH]

HIGHLY ORGANIC SOILS

- ORGANIC SILTS/CLAYS LOW PLASTICITY [OL]**
- ORGANIC SILTS/CLAYS MEDIUM TO HIGH PLASTICITY [OH]**
- PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS [PT]**

RELATIVE DENSITY

(SAND AND GRAVEL)

VERY LOOSE - 0 to 4 Blows/ft.
LOOSE - 5 to 10 Blows/ft.
MEDIUM DENSE - 11 to 30 Blows/ft.
DENSE - 31 to 50 Blows/ft.
VERY DENSE - more than 50 Blows/ft.

CONSISTENCY

(SILT AND CLAY)

VERY SOFT - 0 to 2 Blows/ft.
SOFT - 3 to 4 Blows/ft.
FIRM - 5 to 8 Blows/ft.
STIFF - 9 to 16 Blows/ft.
VERY STIFF - 17 to 30 Blows/ft.
HARD - more than 30 Blows/ft.

* IN ACCORDANCE WITH ASTM D 2487 - UNIFIED SOIL CLASSIFICATION SYSTEM.

** LOCALLY MAY BE KNOWN AS MUCK.

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Important Information About Your

Geotechnical Engineering Report

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

The following information is provided to help you manage your risks.

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

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

Read the Full Report

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

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

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

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

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

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

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

Subsurface Conditions Can Change

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

Most Geotechnical Findings Are Professional Opinions

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

A Report's Recommendations Are *Not* Final

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

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

A Geotechnical Engineering Report Is Subject to Misinterpretation

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

Do Not Redraw the Engineer's Logs

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

Give Contractors a Complete Report and Guidance

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

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

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

Obtain Professional Assistance To Deal with Mold

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

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information

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e-mail: info@asfe.org www.asfe.org

IRER05045.0M

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data related only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations. Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of drilling resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water level may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional review may be required.