

Replacement

AGENDA	
Section	Consent
Item No.	II A 1

Meeting Date
December 9, 2014

**AGENDA REPORT***BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS*

SUBJECT:	FINAL PLAT AND CONTRACT APPROVAL RE: STROM PARK PHASE 2A SUBDIVISION DEVELOPER: THE VIERA COMPANY FISCAL IMPACT: NONE DISTRICT 4
DEPT/OFFICE:	PLANNING & DEVELOPMENT DEPARTMENT & PUBLIC WORKS DEPARTMENT

Requested Action:

It is requested that the Board of County Commissioners grant final plat and contract approval and authorize the Chairman to sign the final plat, subdivision infrastructure construction contract and Roadway Remedial Action Agreement for the above referenced project.

Summary Explanation & Background:

Staff has reviewed the final plat, contract and remedial action agreement and recommends approval of these documents. Strom Park Phase 2A is a road plat that extends Lake Andrew Drive, within the Strom Park subdivision, which is also a part of the Village 1 development area of the West Viera DRI-PUD. It is located approximately 3700 feet south of Wickham Road in Viera, and is approximately 4.49 acres.

The Strom Park project received final engineering and preliminary plat approval by the Board on March 5, 2013. The applicant seeks to post a performance bond to guarantee the completion of the infrastructure improvements prior to the road becoming a public roadway accepted by the Board for future maintenance.

The attached Roadway Remediation Action Agreement (Agreement) is also proposed for Board acceptance to address unique roadway occurrences that both The Viera Company (TVC) and staff have observed along this roadway's northern segment. The Agreement is intended to ensure that unique roadway occurrences (identified as "weeping" which is a term that describes moisture coming up through the pavement surface) are corrected or prevented prior to the roadway being accepted as a public roadway. The recommended remedial actions in the Agreement were identified by Universal Engineering Services, Inc. TVC has agreed to undertake restoration and/or repair work prior to the two (2) year term of the maintenance bond and agreement's expiration.

This approval is subject to minor engineering changes as applicable. Board approval of this project does not relieve the developer from obtaining all other necessary jurisdictional permits.

Staff Contacts: Eden Bentley 633-2090, Tad Calkins 633-2069, John Denninghoff 617-7202

Clerk to the Board instruction: Please return original contract and certified copy to Land Development

Exhibits Attached: location maps and photos, contract, and agreement.

Contract /Agreement (If attached): Reviewed by County Attorney Yes No PR

County Manager

Assistant County Manager

Stockton Whitten

Mel Scott

Department Director / Extension

Robin M. Sobrino, AICP

Planning & Development Department Ext. 5-2069

John Denninghoff, P.E., Director, Public Works



Tammy Etheridge, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972

December 10, 2014

M E M O R A N D U M

TO: Robin Sobrino, Planning and Development Director Attn: Tad Calkins

RE: Item II.A.1., Final Plat and Contract for Strom Park Phase 2A Subdivision – The Viera Company

The Board of County Commissioners, in regular session on December 9, 2014, granted final plat and Contract approval with The Viera Company; and approved a change in Section 1 of the Roadway Remediation Action Agreement allowing for five year evaluation period instead of two year evaluation period. Enclosed are the original and a certified copy of Contract, and original and a certified copy of the Roadway Remedial Action Agreement.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Etheridge, Deputy Clerk

/ds

Encl. (4)

cc: Contracts Administration

**Subdivision No. 14 ER-00323/12SD-00735 Project Name STROM PARK PHASE 2A,
LAKE ANDREW DRIVE EXTENSION**

**Subdivision Infrastructure
Contract**

THIS CONTRACT entered into this 9 day of December 2014, by and between the Board of County Commissioners of Brevard County, Florida, hereinafter referred to as "COUNTY," and THE VIERA COMPANY, hereinafter referred to as "PRINCIPAL."

WITNESSETH:

IN CONSIDERATION of the mutual covenants and promises herein contained, the parties hereto agree as follows:

1. The PRINCIPAL agrees to construct the improvements described below:

and all other improvements depicted in subdivision number 14ER-00323/12SD-00735. A copy of said plat to be recorded in the Plat Books of the Public Records of Brevard County.

2. Principal agrees to construct the improvements strictly in accordance with the plans and specifications on file in the Land Development Division (which construction is hereinafter referred to as the "Work"). Such plans and specifications (hereinafter referred to as the "Plans") are hereby incorporated into this Agreement by reference and made a part hereof. Principal warrants to County that the Work will conform to the requirements of the Plans and other requirements specified in the County's approval of the Work. Principal also warrants to County that the Work will be free from faults and defects. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered to be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this paragraph 2.

If within two (2) years after approval and acceptance of the improvements by County, any Work is found to be defective, Principal shall promptly, without cost to County, either correct such defective Work, or, if it has been rejected by County, remove it from the site and replace it with nondefective Work. If Principal does not promptly comply with the terms of such instructions, County may elect any of the remedies provided for in paragraph 6 hereinbelow. Corrective Work shall be warranted to be free from defects for a period of six (6) months. Any defect in such Work shall be corrected again by Principal promptly upon notice of the defect from County. In the event the maintenance bond given by Principal in connection with County's acceptance of the improvements is extended, the two (2) year warranty period provided for herein shall be extended for a like period.

To the extent assignable, Principal assigns to County all of Principal's warranty rights under its construction contract with the contractor constructing the improvements (including all warranties provided by law of in equity with respect to such construction contract), which warranties may be asserted by County on behalf of Principal in the event Principal fails to perform its warranty obligations hereunder. Where warranties granted hereunder overlap, the more stringent requirement shall control."

3. The PRINCIPAL agrees to complete said construction on or before the 15th day of JULY, 2015.

4. In order to guarantee performance of PRINCIPAL'S obligations herein contained, PRINCIPAL shall furnish cash, letter of credit, certificate of deposit or surety bond in a form approved by the COUNTY, in the amount of \$\$787,433.44. If such bond is a cash bond or a certificate of deposit, said amount shall be deposited with the Board of County Commissioners. Said bond shall be 125% of the estimated cost of construction, as determined by the Land Development Division. PRINCIPAL shall maintain such records and accounts, including property, personnel, financial records, as are deemed necessary by the COUNTY to ensure proper accounting for all funds expended under the agreement. Said records shall be made available upon request for audit purposes to Brevard County and its auditors. In addition, Principal has entered into a Roadway Remedial Action Agreement providing assurances beyond the standard assurances described herein.
5. The COUNTY agrees to accept said plat above described for recording in the public records of Brevard County, Florida and to accept the areas depicted thereon as dedicated for public use, including but not limited to streets and parks, at such time as said improvements are satisfactorily completed. Satisfactory completion in accordance with the plans and specifications shall be determined by written approval of the County Development Engineer or designated assistant.
6. In the event, PRINCIPAL fails to complete said improvements within the time prescribed, the COUNTY may elect to take all or any of the following actions:
 - A. Vacate all or part of such recorded plat where improvements have not Been completed in accordance with the plans and specifications,
 - B. Complete the improvements utilizing COUNTY employees and materials and request payment from the bond or the PRINCIPAL,
 - C. Request the surety on said performance bond to complete such improvements, or
 - D. Contract for completion of said improvements.
7. The PRINCIPAL and Surety on said performance bond shall be liable for all costs, expenses, and damages incurred by the COUNTY, including attorney's fees, in the event the PRINCIPAL defaults on this contract.
8. In the performance of this Agreement, the PRINCIPAL shall keep books, records, and accounts of all activities, related to the agreement, in compliance with generally accepted accounting procedures. Books, records and accounts related to the performance of this agreement shall be open to inspection during regular business hours by an authorized representative of the Office and shall be retained by the PRINCIPAL for a period of three years after termination of this agreement. All records, books and accounts related to the performance of this agreement shall be subject to the applicable provisions of the Florida Public Records Act, Chapter 119 of the Florida Statutes.
9. No reports, data, programs or other materials produced, in whole or in part for the benefit and use of the County, under this agreement shall be subject to copyright by PRINCIPAL in the United States or any other country.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and year first above written.

ATTEST:

[Signature]
Scott Ellis, Clerk

**BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA**

[Signature]
Robin Fisher, Chairman

As approved by the Board on: December 9, 2014.

WITNESSES:

PRINCIPAL: The Viera Company

[Signature] [Signature]
Mary Ellen McKibben Stephen L. Johnson, as President

[Signature] 12-3-14
DATE

State of
County of

The foregoing instrument was acknowledged before me this 3rd day of December 2014, by Stephen L. Johnson, as president, who is personally known to me or who has produced as identification and who did (did not) take an oath.

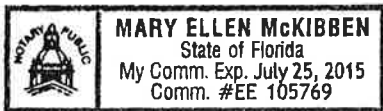
My commission expires:

S E A L

Commission Number:

[Signature]
Notary Public

Mary Ellen McKibben
Notary Name printed, typed or stamped



ROADWAY REMEDIAL ACTION AGREEMENT

THIS ROADWAY REMEDIAL ACTION AGREEMENT is made and entered into as of the 9 day of December, 2014 by and between THE VIERA COMPANY, a Florida corporation (hereinafter referred to as "Viera"), and the BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA (hereinafter referred to as "County").

RECITALS

A. Viera is the owner and developer of that certain residential subdivision known as STROM PARK PHASE 1, according to the plat thereof recorded in Plat Book 59, page 71, Public Records of Brevard County, Florida (hereinafter referred to as the "Phase 1 Subdivision").

B. Viera is also the owner and developer of that certain unplatted residential subdivision known as STROM PARK PHASE 3 (hereinafter referred to as the "Phase 3 Subdivision"), and that certain unplatted road plat known as STROM PARK PHASE 2A (hereinafter referred to as the "Phase 2A Subdivision"). Both the Phase 3 Subdivision and the Phase 2A Subdivision contain roadway sections that will be dedicated to the County upon the recording of the plats.

C. Subsequent to the completion of the infrastructure of the Phase 1 Subdivision, the parties noticed that an area in the south bound section of Lake Andrew Drive in front of Quest Elementary School was "weeping" (that is, moisture was coming up through the pavement surface). Such portion of Lake Andrew Drive and the locations at which the "weeping" occurred are depicted on Exhibit "A", attached hereto and made a part hereof (hereinafter referred to as the "Subject Roadway Section").

D. County engaged Universal Engineering Sciences, Inc. (hereinafter referred to as "Universal") to perform sixteen (16) augur borings in the Subject Roadway Section and various locations within Strom Park and Lake Andrew Drive. Four bores were conducted in the Subject Roadway Section, eight bores were conducted within the plat of Lake Andrew Drive, Phase 2A and four bores at various locations within Strom Park Phases 1 and 2. Such testing was completed by Universal in October, 2014.

E. Subsequently, Viera engaged Universal to analyze the results of the testing conducted at the request of County and recommend remedial action to correct the "weeping" condition in the Subject Roadway Section. A copy of the report, which was dated November 4, 2014, is attached hereto as Exhibit "B" and made a part hereof (hereinafter referred to as the "Universal Report").

F. Viera believes the remedial action recommended in paragraphs 1 and 2 under the heading "Strom Park Phase 1 – Lake Andrew Drive Section" of the Universal Report (hereinafter referred to as the "Universal Recommended Remedial Action") will correct the "weeping" condition in the Subject Roadway Section. County has reservations as to whether the Universal Recommended Remedial Action will correct the "weeping". In addition, Viera has obtained and delivered to the County a two year maintenance bond in connection with the platting of the Phase 1 Subdivision (hereinafter referred to as the "Maintenance Bond"). The parties acknowledge that

the Maintenance Bond will remain in effect until on or about April 29, 2016 (and may be extended until April 29, 2020 as provided in paragraph 3 hereinbelow).

G. Viera has agreed to cause the Universal Recommended Remedial Action to be constructed and completed in the Phase 1 Subdivision. Viera also desires to provide County assurance that if such remedial action does not correct the "weeping" condition in the Subject Roadway Section, as determined during the "Evaluation Period" provided for hereinbelow, that Viera will undertake additional restoration and repair work to the Subject Roadway Section and complete the same so as to ensure the "weeping" condition is remedied.

H. County has also requested that Viera provide assurance that in the event a similar "weeping" condition or other adverse roadway condition which may be caused by surface water drainage and which County reasonably believes is not covered by the applicable maintenance bond (hereinafter referred to as an "Anomalous Roadway Condition") occurs on roadways in either the Phase 3 Subdivision or the Phase 2A Subdivision during the two year period in which the maintenance bonds are in effect for those subdivisions, that Viera will undertake restoration and repair work to the roadways and complete the same so as to ensure the Anomalous Roadway Condition is remedied.

NOW, THEREFORE, in consideration of the foregoing and for other and good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Recitals. The recitals set forth hereinabove are true and correct in all respects and are incorporated herein by reference as fully as if set forth herein verbatim.

2. Implementation of Universal Report. Viera covenants and agrees to cause the Universal Recommended Remedial Action to be constructed and completed in a good and workmanlike manner at the sole cost and expense of Viera. Viera agrees to complete the Universal Recommended Remedial Action on or before February 28, 2015. Viera agrees to obtain all necessary governmental permits to implement the Universal Recommended Remedial Action, provided that any delay in obtaining the required permits shall extend the deadline date for completing the Universal Recommended Remedial Action provided for in the immediately preceding sentence.

3. Evaluation and Testing of Remedial Action under Universal Report. The parties shall each evaluate the effectiveness of the Universal Recommended Remedial Action by inspecting the Subject Roadway Section from time to time during the sixty (60) month period after the completion of the Universal Recommended Remedial Action (hereinafter referred to as the "Evaluation Period"). If at the expiration of the Evaluation Period County determines that the Universal Recommended Remedial Action has not corrected the "weeping" condition in the Subject Roadway Section, County shall notify Viera in writing of its determination within thirty (30) days after the expiration of the Evaluation Period. Such notice shall advise Viera of the basis of its determination with reasonable specificity and include a geotechnical engineering firm's evaluation (hereinafter referred to as the "Evaluation Report"), obtained by the County at the County's sole cost and expense, which sets forth (i) such firm's evaluation of whether the remedial actions recommended by the Universal Report were successful in remedying the "weeping" condition, and (ii) if it determines that the Universal Recommended Remedial Action was not successful, the additional remedial action which such firm recommends be taken in order

to remedy the “weeping” condition in the Subject Roadway Section (hereinafter referred to as “Additional Remedial Action”). In the event County fails to deliver written notice that the Universal Recommended Remedial Action has failed to correct the “weeping” condition on or before thirty (30) days after the expiration of the Evaluation Period, County shall be deemed to have agreed that the “weeping” condition has been corrected.

If the Evaluation Report recommends Additional Remedial Action, Viera covenants and agrees to have the Maintenance Bond extended until April 29, 2020. Viera shall have the option to engage a second geotechnical engineering firm, at Viera’s sole cost and expense, to review the determination and recommendations of the Evaluation Report. Viera shall have the right to request the County Manager’s office to consider any additional information, analysis and recommended revisions to the Additional Remedial Action provided by such second geotechnical engineering firm by delivering written notice thereof, together with a copy of the report of such second geotechnical engineering firm, within thirty (30) days after Viera’s receipt of the Evaluation Report. After reviewing such additional information, analysis and recommended revisions, the County Manager’s office shall advise Viera of its determination as to whether to accept any of the recommended revisions to Additional Remedial Action proposed by such second geotechnical engineering firm. In the event Viera fails to deliver written notice to the County Manager’s office within thirty (30) days after Viera’s receipt of the Evaluation Report requesting that it consider additional information, analysis and recommended revisions to the Additional Remedial Action, Viera shall be deemed to have accepted and agreed to the Additional Remedial Action. The Additional Remedial Action, together with any recommended revisions thereto accepted by the County Manager’s office, are hereinafter collectively referred to as the “Phase 1 Finalized Additional Remedial Action”. Viera shall have the right to petition the County Commission to reconsider the decision of the County Manager’s office concerning the Phase 1 Finalized Additional Remedial Action, but Viera understands and agrees the County Commission shall not be obligated to accept or grant any such request.

4. Phase 1 Finalized Additional Remedial Action. Viera covenants and agrees to cause any and all Phase 1 Finalized Additional Remedial Action to be constructed and completed in a good and workmanlike manner at the sole cost and expense of Viera. Viera agrees to complete construction of the Phase 1 Finalized Additional Remedial Action, if any, within a reasonable period of time, based on the scope and complexity of the work, after receipt of the Evaluation Report.

5. Phase 2A Subdivision and Phase 3 Subdivision.

(a) In the event an Anomalous Roadway Condition occurs on roadways in either the Phase 2A Subdivision or the Phase 3 Subdivision within two (2) years after recording the applicable plat, Viera shall correct the condition following the procedure provided for hereinbelow. Within thirty (30) days after receipt of notice from the County that an Anomalous Roadway Condition has occurred in the either the Phase 2A Subdivision or the Phase 3 Subdivision, Viera shall hire a geotechnical engineering company, at Viera’s sole cost and expense, to analyze the problem and provide a report along with suggested remedial actions. Viera shall provide a copy of the report to the County promptly after its receipt of the same. Viera and the County shall then meet to jointly review and discuss the report and any remedial actions recommended by the applicable geotechnical engineering firm. Unless either the County or Viera asserts a reasonable objection to the implementation of the remedial action, if any, recommenced in the report, Viera shall obtain all necessary permits and implement the remedial

action within a reasonable period of time, based on the scope and complexity of the work, after the date of the parties' meeting (or in accordance with such other time frame as the parties agree upon at the meeting).

(b) Viera and County shall each evaluate the effectiveness of any remedial action taken pursuant to subparagraph 5(a) hereinabove by inspecting the roadway or roadways at issue, if any, from time to time during the twelve (12) month period after the completion of the remedial action (hereinafter referred to as the "Evaluation Period for Phases 2A and 3"). If at the expiration of the Evaluation Period for Phases 2A and 3 County determines that the remedial action has not corrected the Anomalous Roadway Condition, County shall notify Viera in writing of its determination within sixty (60) days after the expiration of the Evaluation Period for Phases 2A and 3. Such notice shall advise Viera of the basis of its determination with reasonable specificity and include a geotechnical engineering firm's evaluation (hereinafter referred to as the "Evaluation Report for Phases 2A and 3"), obtained by the County at the County's sole cost and expense, which sets forth (i) such firm's evaluation of whether the remedial actions recommended by the prior report for Phase 2A and 3 were successful in remedying the Anomalous Roadway Condition, and (ii) if it determines that the remedial action for Phase 2A and 3 was not successful, the additional remedial action which such firm recommends be taken in order to remedy the Anomalous Roadway Condition (hereinafter referred to as the "Phase 2A and 3 Additional Remedial Action"). In the event County fails to deliver written notice that the Phase 2A and 3 remedial actions plan has failed to correct the unacceptable conditions or deficiencies on or before sixty (60) days after the expiration of the Evaluation Period for Phase 2A and 3, County shall be deemed to have agreed that the problems have been corrected in Phase 2A and 3.

If the Evaluation Report for Phases 2A and 3 recommends any Phase 2A and 3 Additional Remedial Action, Viera shall have the option to engage a second geotechnical engineering firm, at Viera's sole cost and expense, to review the determination and recommendations of the Evaluation Report for Phase 2A and 3. Viera shall have the right to request the County Manager's office to consider any additional information, analysis and recommended revisions to the Phase 2A and 3 Additional Remedial Action provided by such second geotechnical engineering firm by delivering written notice thereof, together with a copy of the report of such second geotechnical engineering firm, within thirty (30) days after Viera's receipt of the Evaluation Report for Phase 2A and 3. After reviewing such additional information, analysis and recommended revisions, the County Manager's office shall advise Viera, within sixty (60) days after receipt of such additional information, analysis and recommended revisions, of its determination as to whether to accept any of the recommended revisions to the Phase 2A and 3 Additional Remedial Action proposed by such second geotechnical engineering firm. In the event Viera fails to deliver written notice to the County Manager's office within thirty (30) days after Viera's receipt of the Evaluation Report for Phase 2A and 3 requesting that it consider additional information, analysis and recommended revisions to the Phase 2A and 3 Additional Remedial Action, Viera shall be deemed to have accepted and agreed to the Phase 2A and 3 Additional Remedial Action. The Phase 2A and 3 Additional Remedial Action, together with any recommended revisions thereto accepted by the County Manager's office, are hereinafter collectively referred to as the "Phase 2A and 3 Finalized Additional Remedial Action". Viera shall have the right to petition the County Commission to reconsider the decision of the County Manager's office concerning the Phase 2a and 3 Finalized Additional Remedial Action, but Viera

understands and agrees the County Commission shall not be obligated to accept or grant any such request.

(c) Viera covenants and agrees to cause any and all Phase 2A and 3 Finalized Additional Remedial Action to be constructed and completed in a good and workmanlike manner at the sole cost and expense of Viera. Viera agrees to complete construction of the Phase 2A and 3 Finalized Additional Remedial Action, if any, within a reasonable period of time, based on the scope and complexity of the work, after receipt of the Evaluation Report for Phase 2A and 3.

6. Insurance. Prior to the commencement of construction of any improvements or other remediation work pursuant to this Agreement, Viera shall cause its contractors to obtain and maintain comprehensive public liability insurance, issued by a company qualified to do business in the State of Florida, with coverage in an amount of not less than \$1,000,000.00 combined single limit of liability for bodily injuries, death and property damage for each occurrence, and \$2,000,000.00 combined single limit of liability for injury and/or death to any number of persons in any one accident and property damage, in the aggregate. The public liability policy shall name County and Viera as additional insureds, the company writing such policy shall agree to give both the named and additional insureds not less than thirty (30) days' notice in writing prior to any cancellation, modification or reduction of such insurance, and each such policy shall be written as a primary policy, not entitled to contribution from, nor contributing with, any coverage which County may carry. In addition, workman's compensation or similar insurance to the extent required by law shall be maintained by all contractors engaged by Viera pursuant to this Agreement. Copies of said policies or certificates thereof shall be delivered to County if requested by it in writing.

7. Acceptance of Plats. County agrees that it shall not delay the processing of, or fail to accept for recording in the Public Records of Brevard County, Florida, the plats of STROM PARK PHASE 2A and STROM PARK PHASE 3 within the Viera Development of Regional Impact as a result of the "weeping" condition in the Subject Roadway Section.

8. Defaults. In the event Viera fails to perform its obligations hereunder to implement, construct and complete the remedial action specified in the Universal Report and any Finalized Additional Remedial Action specified in the Evaluation Report, then County may elect to take all or any of the following actions.

(a) Undertake and complete the applicable remedial action utilizing County employees and materials;

(b) Enter into a contract for the completion of the applicable remedial action with a contractor selected by County; or

(c) Request the surety under the Maintenance Bond to complete the applicable remedial action.

In any event, Viera shall be liable to County for all costs, expenses and damages incurred by County in the event Viera defaults in the performance of its obligations under this Agreement.


9. Miscellaneous. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. Facsimile or electronically transmitted copies of this Agreement and the signatures thereon shall have the same force and effect as if the same were original

documents. Facsimile or electronically transmitted signatures are acceptable and shall be deemed to be original signatures. This writing constitutes the entire agreement between the parties and supersedes and merges all prior oral or written agreements, representations, statements, proposals and undertakings between the parties regarding the subject matter hereof. No covenants, agreements, terms, provisions, undertakings, statements, representations or warranties, whether written or oral, made or executed by any party hereto or any employee or agent thereof, shall be binding upon any party hereto unless specifically set forth in this Agreement. The exhibits attached hereto and referred to herein are by such attachment and reference made a part of this Agreement for all purposes. This Agreement or any provision hereof may be amended or waived only by written agreement signed by both parties. No failure or delay by a party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege. Nothing contained herein shall be construed to imply a partnership, joint venture, principal and agent or employer and employee relationship between the parties. No provision in this Agreement shall provide to any person not a party to this Agreement any remedy, claim or cause of action, or create any third-party beneficiary rights against either party. In the event that any one or more of the provisions in this Agreement shall for any reason be held to have no force and effect, this Agreement shall, if possible, be interpreted in a manner so as to effectuate the intention of the parties. This Agreement is the subject of negotiation between the parties and should not be interpreted more favorably toward one party over the other. The paragraph headings herein contained are inserted for convenience of reference only and shall not be deemed to be a part of this Agreement; the paragraph headings shall be ignored in construing and interpreting this Agreement. Whenever used herein, the singular number includes the plural, the plural the singular, and the use of any gender includes all genders. Provisions contained in this Agreement that, by their sense and context, are intended to survive the suspension or termination of this Agreement, shall so survive. Neither party may assign this Agreement without the prior written consent and approval of the other party. No party shall be responsible for failure or delay in performance hereunder if such delay or failure in performance is caused by conditions beyond such party's reasonable control, including without limitation fire, flood, riot, strikes, labor disputes, acts of God or of the public enemy, war or civil disturbances, or any future laws, rules, regulations or acts of any government (including any orders, rules or regulations issued by any official or agency of such government). All disputes related to this Agreement shall in the first instance be referred to the appropriate executives of each party for resolution. This Agreement and the interpretation and enforcement thereof shall be governed by and construed in accordance with the laws of the State of Florida. The venue of any litigation arising out of this Agreement shall be Brevard County, Florida.

[The balance of this page is intentionally left blank.]


IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed in their respective names as of the day and year first above written.

Attest:



Scott Ellis, Clerk

BOARD OF COUNTY COMMISSIONERS OF
BREVARD COUNTY, FLORIDA

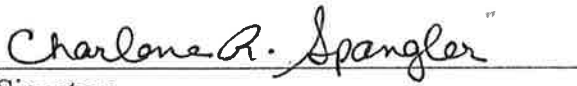


Robin Fisher, Chairman

As approved by the Board on December 9,
2014


Signed, sealed and delivered in the presence
of:

THE VIERA COMPANY, a Florida
corporation



Signature
Charlene R. Spangler

Print Name

By: 

Stephen L. Johnson, President

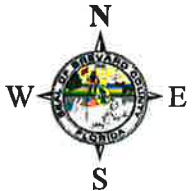
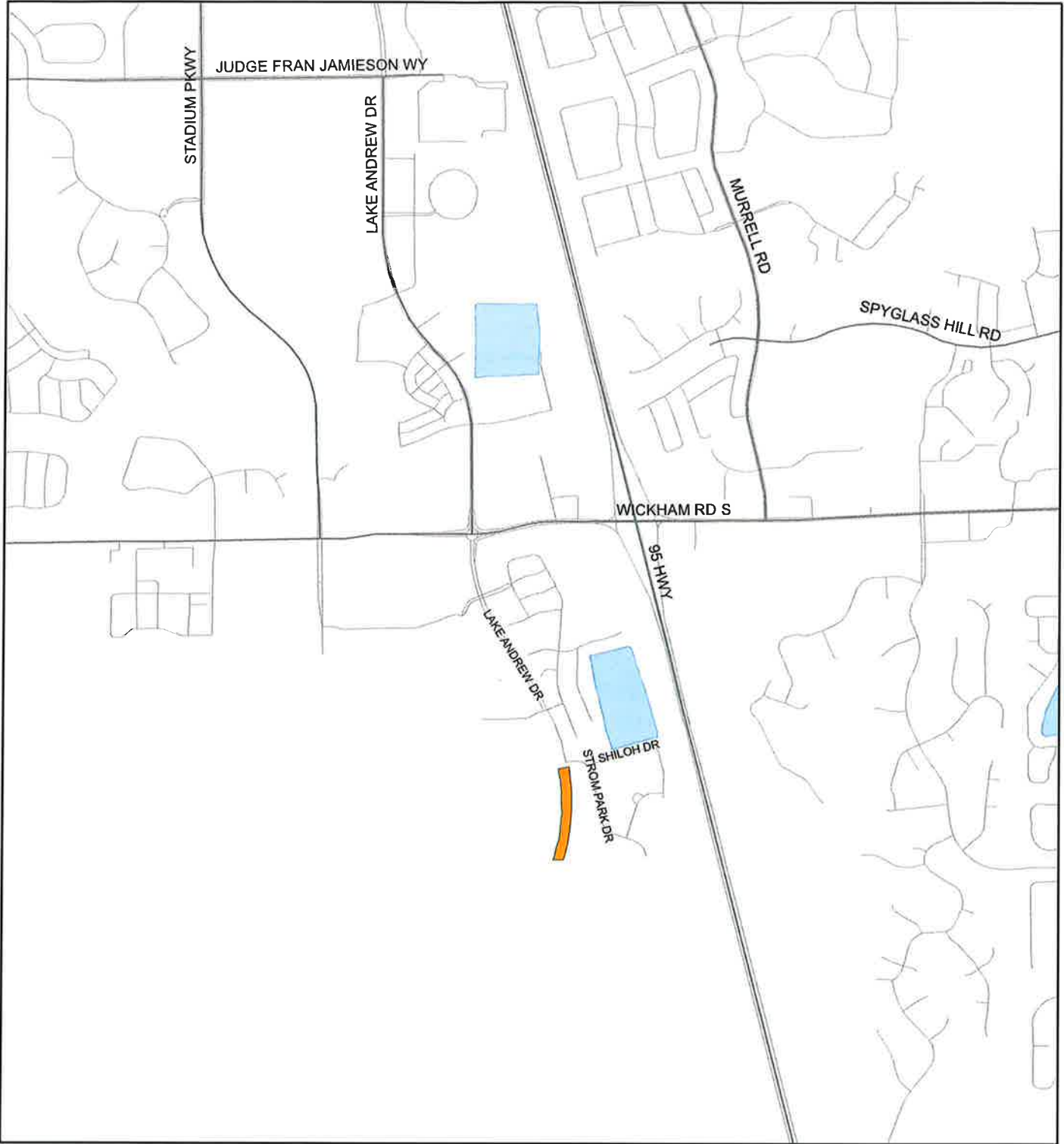


Signature
SANDRA PATRICK

Print Name

V0239658.1

LOCATION MAP
STROM PARK PHASE 2A SUBDIVISION
14SD-00454



1:24,000 or 1 inch = 2,000 feet

 Subject Property

This map was compiled from recorded documents and does not reflect an actual survey. The Brevard County Board of County Commissioners does not assume responsibility for errors or omissions hereon.

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



**UNIVERSAL
ENGINEERING SCIENCES**

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:

- Atlanta
- Daytona Beach
- Fort Myers
- Fort Pierce
- Gainesville
- Jacksonville
- Kissimmee
- Leesburg
- Miami
- Ocala
- Orlando (Headquarters)
- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- Tampa
- West Palm Beach

November 4, 2014

Mr. Stephen Johnson
The Viera Company
7380 Murrell Road
Suite 201
Melbourne, FL 32940

Reference: Roadway Drainage Observations
Strom Park Phase 1 (Roadways and Lake Andrew Drive Section)
Lake Andrew Drive Phase 2A section
Viera, Florida
Universal Project No. 0310.1300048.0000
Docs No. 1168762v2

Dear Mr. Johnson:

Universal Engineering Sciences, Inc. (Universal) has completed observations of the section of Lake Andrew Drive directly west of Strom Park Phase 1, Viera, Florida. The work was authorized by Ms. Mary Ellen McKibben. The assessment was performed in accordance with generally accepted engineering practices, but was originally limited to visual observations only. No other warranty, expressed or implied, is made.

The primary purpose of our original visual observations was to help determine the most probable cause(s) of moisture coming up through the pavement on the south bound section of Lake Andrew Drive in front of Quest Elementary School and to outline general recommendations to address the issue.

Since those original observations occurred, we have issued a limited subsurface exploration report for Brevard County on the above referenced section of Lake Andrew Drive, secondary roadways within Strom Park, and Lake Andrew Drive 2A section.

Background

Universal understands that the Strom Park Phase 1 section of Lake Andrew Drive was built more than a year ago and that there were no observed problems with water seeping up through the asphalt at the time that the road was accepted by the County. Approximately 6 months ago, The Viera Company went back to this area and made changes to the vegetation on the large grass median in this section of the road. They removed the grass and planted a few palm trees and some small plants in 3 locations on the median. As a result of these changes, the designed 3 percent positive slope of the median (crowned in the middle) was flattened out in these planter areas. We understand that these planter areas have been irrigated, perhaps very heavily over the last few months. Since the planter

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Limited Roadway Drainage Observations
Lake Andrew Drive at Strom Park, Viera, FL

Universal Project No. 0310.1300048.0000
November 4, 2014

changes were made, it has been observed that there was a limited area of water seepage through the asphalt only occurring between the center planter and the pond on the west side of the south bound Lake Andrew Drive just north of the south entrance to the school.

Observations

An engineering representative of Universal visited the above referenced site on October 14, 2014 to visually inspect the area of concern for possible reasons for the reported seepage issue. At the time of our visit, the following observations were made:

1. Staining of the surface of the asphalt from recent seepage was observed only on the southbound lane between the center planter area and the retention pond on the west side of the road. No seepage was observed on any other areas of this section of Lake Andrew Drive.
2. No cracking, rutting, or any other structural issues were observed anywhere on the surface of this section of Lake Andrew Drive.
3. The planter area grades appeared to be flatter than the design 3 percent slope, but were still gradually sloped downward toward the curb.
4. The soil grade observed directly beside the curb at the central planter area and some other planter areas on this section of Lake Andrew Drive were observed to be lower than top of curb.
5. It is understood from prior conversation with Brevard County officials that there has been standing water observed within the planter areas (especially noticed in the area of concern) during the time frame that the problem was reported. During this time frame there was heavy irrigation being performed within a particularly wet rainy season, (summer of 2014).
6. The overall grade of the grassed area of the median does not appear to have a consistent slope from the crown to the curb. There are some areas within the grassed median slope that appear to be relatively flat, which might temporarily hold runoff water or direct it laterally instead of over the curb.
7. Shortly after the seepage problem was reported, the heavy irrigation process in the median was curtailed (also the rainy season ended) and we understand that the seepage problem is no longer happening.

Brevard County Soils Testing Program

During the month of October, 2014, the Brevard County Transportation Department had Universal Engineering perform 16 auger borings within a few areas along Lake Andrew Drive, Lake Andrew 2A, and within Strom Park phase 1. The soil borings were performed approximately 1 ½ feet outside the curb of existing paved streets to depths of 4 or 4 ½ feet below the ground surface. The soil stratigraphy was found to consist mainly of very loose to very dense fine Sands with trace of silt and occasional inclusions of clay lumps and shell.

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)
Limited Roadway Drainage Observations Universal Project No. 0310.1300048.0000
Lake Andrew Drive at Strom Park, Viera, FL November 4, 2014

The top 1 to 3 1/2 feet consisted of fill material. The groundwater was found to range between 2 1/2 to 4 1/2 feet below the ground surface depending upon location.

Based on the information gained from the soils classifications provided to the County, they decided to get 9 permeability tests performed on remolded samples collected from depths between 2 to 4 feet below ground surface. The results indicated that the well compacted fill materials had permeability rates mostly in the slow to moderately rapid range of approximately 0.1 to 2 inches per hour. The samples that ran slow mostly contained the clay lumps. The native soils consisting mainly of clean fine Sand had permeability rates mostly in the moderately rapid to rapid range of approximately 1 to 6 inches per hour. The average of all of the permeability tests was roughly 2 inches per hour. The average permeability rate of 2 inches per hour (4 feet per day) is in accordance with the global generalized design assumptions used in the groundwater modeling study previously performed for this site by Universal.

Universal was not asked to give opinions on the suitability of the explored soils for the intended construction as part of the County's study. Note that it is our opinion that the overall subsurface conditions explored in the County's investigation are suitable for road construction and do have the assumed global generalized drainage characteristics used for the groundwater modeling study. There are some non-homogeneous fill soils that were found that are suitable for structural fill but have a slower permeability rate than desired. We believe that these small areas should not be a problem for the roads if positive surface drainage is constructed in accordance with the Civil Engineer's design and Brevard County's codes. Positive surface drainage conditions will limit the occurrence of point charge rainfall infiltration areas that could result in excessive mounding or perching conditions not anticipated in the groundwater modeling study.

Limited Analysis and General Recommendations

Strom Park Phase 1 – Lake Andrew Drive section

Based on our observations at the time of the visit, it is likely that there is a moisture intrusion point into the base course underlying the asphalt within the area of concern. We believe that rain and irrigation water that is allowed to temporarily pond directly behind the concrete curb is leaching through the pores/cracks/joints of the concrete of the curb into the crushed concrete base course. The excess moisture is then drawn up through the asphalt via a wicking action caused in no small part by heavy bus traffic in this area. The groundwater table is known to be about 3 to 4 feet below grade in this area and the sub-surface soils are mostly relatively clean sands with mostly slow to moderately rapid (0.1 to 5 inches per hour) permeability rates typical to the area. We believe that the pond on the west side of Lake Andrew Drive is exasperating the problem by creating a horizontal and vertical draw on the groundwater in the immediate area.

There is not currently any visual evidence that there has been any structural damage to the road.

To help alleviate the observed seepage problem, we recommend one or more of the following steps are taken:

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Limited Roadway Drainage Observations
Lake Andrew Drive at Strom Park, Viera, FL

Universal Project No. 0310.1300048.0000

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1. Continue to cut back on the irrigation that is providing some of the water to sit behind the curb.
2. The soil grades in all locations of the median (not just the planters) should be consistently sloped as designed to allow runoff to rapidly go over the curb and into the gutters.
3. A second alternative to re-grading the median is to do nothing (except continue to cut back on irrigation). This seepage problem will likely only be a concern following very heavy storm periods and/or very heavy irrigation and we believe that it is somewhat conservative to take action at this time. While there is some risk in using this alternative, the risk would be mitigated by ongoing monitoring of the area and incorporating the above recommendations or possible re-evaluation of the issue should the problems persist.

Lake Andrew Drive 2A Section

At the time of our original visit, this section was paved but the medians were not final graded and not vegetated. There is not currently any visual evidence that there has been any seepage through the asphalt and there is no evidence of any damage to the road.

To help reduce the potential for any future seepage problems, we recommend one or more of the following steps are taken:

1. The soil grades in all locations of the median should be consistently sloped as designed to allow runoff to rapidly go over the curb and into the gutters. Water should not be allowed to temporarily pond behind the curb. Heavy or excessive irrigation should not be used.
2. Should there be any significant modifications to the design of the median, further evaluation of any required remedial drainage measures are suggested.

Strom Park Phase 1 Roads

At the time of our original visit, this section was paved but the lots were not final graded and not vegetated. There is not currently any visual evidence that there has been any seepage through the asphalt and there is no evidence of any damage to the road.

To help reduce the potential for any future seepage problems, we recommend one or more of the following steps are taken:

1. The soil grades in all lots of future subdivisions should be consistently sloped at a minimum of 1.5% slope from the highpoint of the lot to the front to allow runoff to go over the curb and into the gutters. For subdivisions that are already designed flatter than that, it might be necessary to evaluate any significant areas that are holding surface water for an excessive amount of time for possible remediation. It is our opinion that water should not be allowed to pond anywhere on the lots for more than one day. Excessive irrigation (defined as more than necessary to supplement low rainfall amounts during dry times of the year) should not be allowed.

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ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Limited Roadway Drainage Observations
Lake Andrew Drive at Strom Park, Viera, FL

Universal Project No. 0310.1300048.0000


November 4, 2014

2. If the minimum recommended lot grading slope and/or irrigation controls are expected or determined to not be met for an area of any future subdivisions, we recommend the use of yards drains designed to reduce the occurrence of point charge rainfall/irrigation infiltration areas. This condition could result in excessive mounding or perching conditions that were not anticipated in the groundwater modeling study used in part to determine road grades for Viera subdivisions. The yard drains may consist of well draining sands in the swales to a positive outfall with or without socked under-drain pipe as deemed necessary.

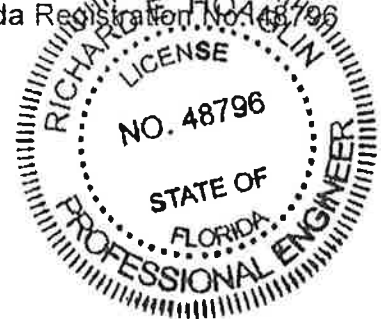
Closure

We appreciate the opportunity to be working with you on this project. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Sincerely yours,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549



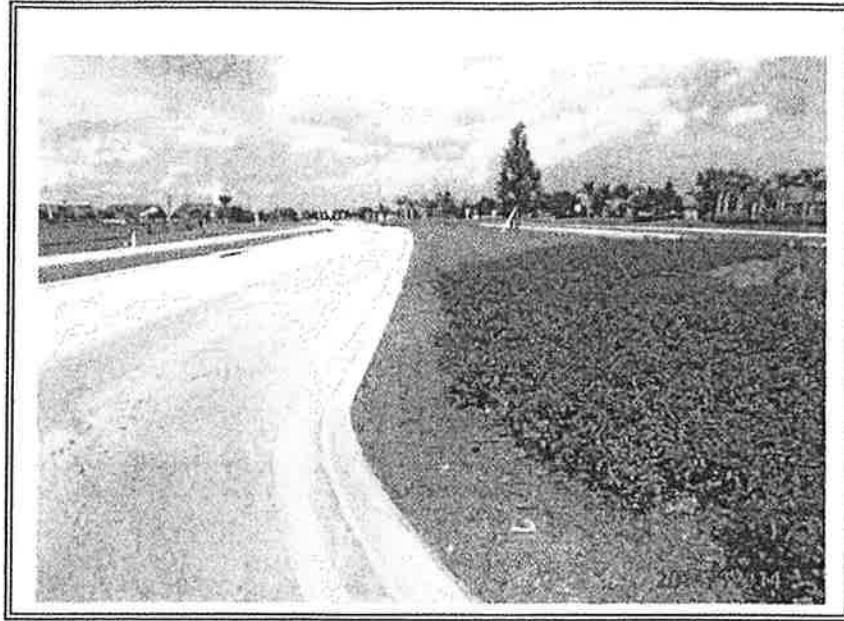
Richard E. Hoaglin, P.E. 11/4/14
Regional Manager
Florida Registration No. 48796



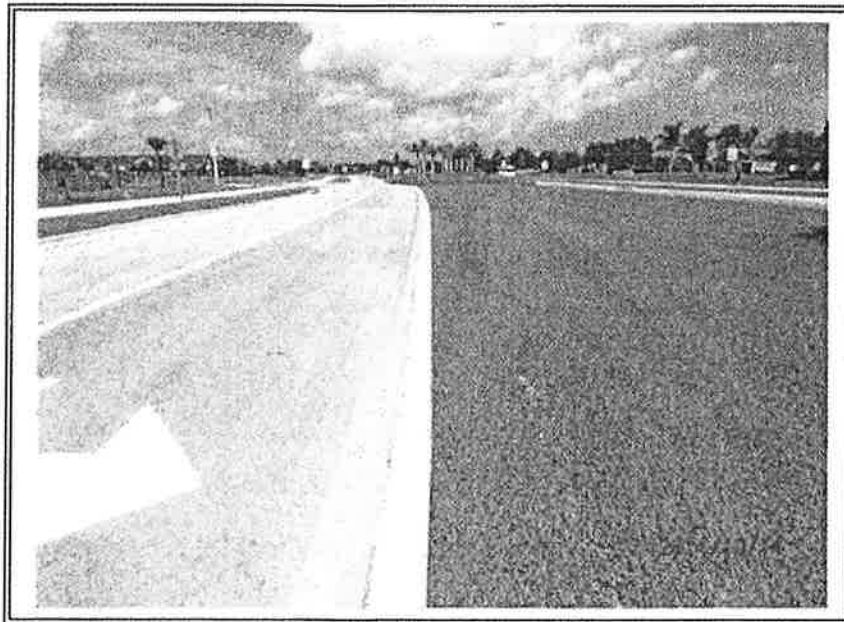
Attachments:

Photographs

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



Planter and curb at south end of median



West side of median not consistently sloped at 3 percent to curb



Strom Park Subdivision, Phase I
Lake Andrew Drive, Brevard County, Florida

Photographs

Project No. 0310.1300048.0000

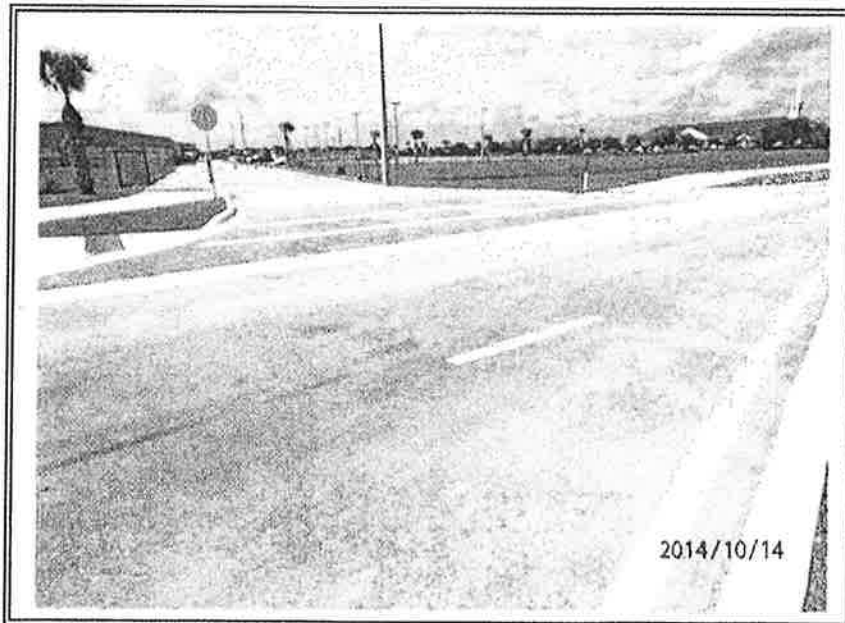
Date of Photos: 10/14/2014

Page 1

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



West side of center planter area



South bound lanes of Lake Andrew Drive where seepage was observed



Strom Park Subdivision, Phase I
Lake Andrew Drive, Brevard County, Florida

Photographs

Project No. 0310.1300048.0000

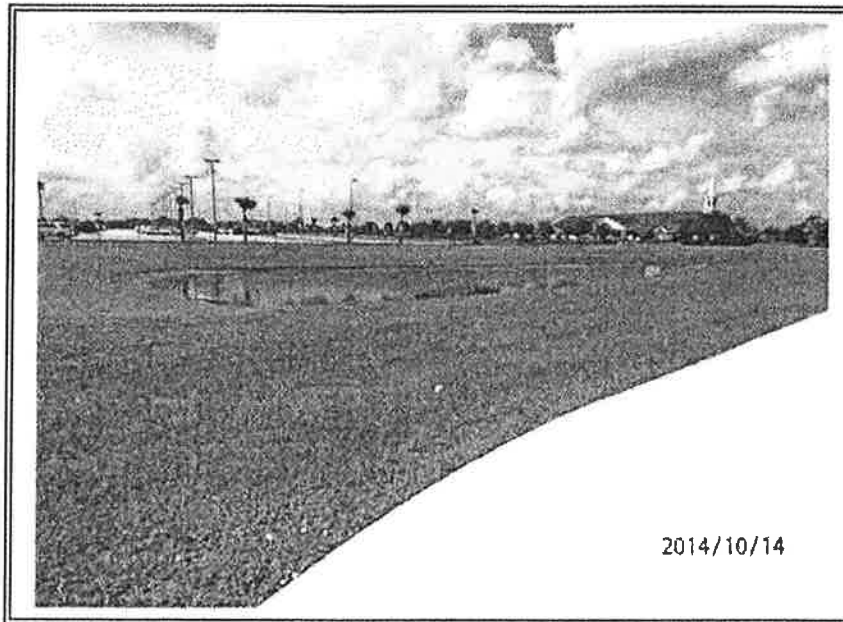
Date of Photos: 10/14/2014

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EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



Center planter area where water is allowed to temporarily pond behind curb



Retention pond west of Lake Andrew Drive



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Strom Park Subdivision, Phase I
Lake Andrew Drive, Brevard County, Florida

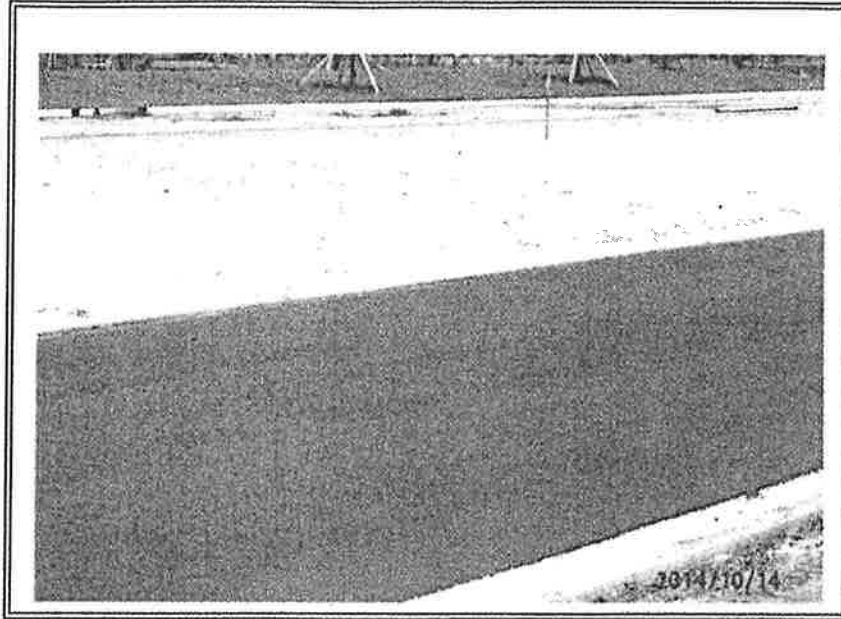
Photographs

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Date of Photos: 10/14/2014

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Lake Andrew Drive Phase 2A paved roadway



Lake Andrew Drive Phase 2A unfinished median



Strom Park Subdivision, Phase I
Lake Andrew Drive, Brevard County, Florida

Photographs

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EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



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- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- Tampa
- West Palm Beach

October 24, 2014

Brevard County Public Works Department
2725 Judge Fran Jamieson Way
Suite 204
Viera, Florida 32940

Attention: Mr. Richard Szpyrka

Reference: Limited Subsurface Exploration
Lake Andrew Drive/Strom Park
Viera, Brevard County, Florida
Universal Project No. 0330.1400095.0000

Dear Mr. Szpyrka:

As requested, Universal Engineering Sciences, Inc. (Universal) has completed a limited subsurface exploration at the above referenced site at in Viera, Brevard County, Florida. Our exploration was authorized by Ms Tammy Thomas-Wood of the Brevard County Public Works Department, under Purchase Order #4500080720, and was performed in accordance with Universal's Proposal No. 0330.0914.00003. This limited exploration was conducted in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made. The following report presents the results and methodologies of our limited subsurface exploration.

PROJECT DESCRIPTION

The primary purpose of this limited subsurface exploration was to provide a "spot check" of the general soil & groundwater conditions (at locations selected by the client) within the right-of ways of Lake Andrew Drive and the roads under construction within the northern portions of the Strom Park Subdivision.

FIELD METHODOLOGIES

A total of sixteen (16) auger borings, designated B1 through B12 and PZ1 through PZ4 on the attached Figures 1 & 2 were drilled to depths of 4 to 4½ feet bls in general accordance with the procedures of ASTM D 1452 (Standard Practice for Soil Investigation and Sampling by Auger Borings). The auger drilling technique involves advancing a slender, solid-stem, bucket auger into the soil to the required depth.

The soil types encountered were evaluated by visually classifying the cuttings recovered from the auger bucket in accordance with ASTM D 2487 guidelines. The auger borings were performed by trained engineering technicians using hand equipment.

OCT 30 2014

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Lake Andrew Drive/Strom Park Subdivision
Viera, Brevard County, Florida

Universal Project No. 0330.1400095.0000
Limited Subsurface Exploration

The auger boring locations were staked in the field (in conjunction with the client's representative) by "spotting" from local landmarks shown on an aerial photograph and should be considered only as accurate as implied by the methods used. No survey control was provided on-site, and our boring locations should be considered approximate. The approximate boring locations are shown on the attached Figures 1 & 2.

Temporary piezometers were initially installed within the auger boreholes so that stabilized groundwater table readings could be obtained. Subsequently, groundwater monitoring wells were installed to a depth of 4½ feet bls at boring locations PZ1 through PZ4. These monitoring wells have an approximate 2 foot long screened section at the bottom and are sealed against surface water inflow by a surficial bentonite sealant material.

We understand that Brevard County personnel will be taking periodic groundwater level measurements within these wells over the next several months.

LABORATORY TESTING

We completed #200 sieve particle size analyses on seventeen (17) representative soil samples. These samples were tested according to the procedures listed ASTM D 1140 (Standard Test Method for Amount of Material in Soils Finer than the No. 200 Sieve). The percentage of soil sizes passing the #200 sieve size are shown on the boring logs at the approximate depth sampled.

In addition, constant head permeability tests were performed on bulk samples obtained from various boring locations and depths (as selected by the client) by first remolding the specimens within a cylindrical chamber, then placing them within the laboratory permeameter. These data were used to calculate the coefficients of permeability (K) of the soils.

Soil permeability is a measure of the soil's ability to allow water flow though it under saturated conditions. Permeability is a function of the grain size and sorting of the entire soil mass. According to the National Soil Survey Handbook, 1993 Edition, published by the U.S. Department of Agriculture, permeability rates can be expressed in the following classes:

Permeability Class	Permeability K (in/hr)
Extremely Slow	0.0 – 0.01
Very Slow	0.01 – 0.06
Slow	0.06 – 0.2
Moderately Slow	0.2 – 0.6
Moderate	0.6 – 2.0
Moderately Rapid	2.0 – 6.0
Rapid	6.0 – 20.0
Very Rapid	> 20.0

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Most "clean" fine sands [SP] typically exhibit moderately rapid to very rapid permeabilities. Fine sands with silt or clay [SP-SM or SP-SC] can usually be considered to have slow to moderately slow permeabilities; while silty sand [SM], clayey sands [SC], silts [ML] and clays [CL] are typically within the extremely slow to slow class.

It should be noted that the coefficient of permeability is not an infiltration rate. The actual infiltration rate is influenced by the coefficient of permeability as well as several factors, including the elevation of the ground surface, the elevation of the wet season water table, and the depth to the confining layer.

The results obtained from our remolded laboratory permeability tests, where K is the coefficient of permeability, are listed in Table I below:

**TABLE I
 PERMEABILITY TEST RESULTS**

Boring Location	Soil Type	Sample Depth (feet bls)	Fraction Passing #200 Sieve (%)	Permeability Rate K (in/hr)	Permeability Class
B1	Fine sand with silt, trace of gravel & clay lumps [SP-SM]	2½	3.9	0.084	Very Slow
B2	Fine sand with silt, trace of gravel, clay lumps & broken shell [SP-SM]	2	3.8	0.052	Very Slow
B8	Fine sand [SP]	2½	3.2	5.4	Moderately Rapid
B12	Fine sand [SP]	3½	3.2	0.91	Moderate
PZ1	Fine sand with clay, gravel & concrete fragments [SP-SC]	2½	9.4	0.51	Moderately Slow
PZ2	Fine sand with silt, trace of gravel, clay lumps & broken shell [SP-SM]	2½	5.2	1.0	Moderate
PZ3	Fine sand with silt, trace of gravel, clay lumps & broken shell [SP-SM]	2½	5.3	2.2	Moderately Rapid
PZ3	Fine sand [SP]	4	--	6.4	Rapid
PZ4	Fine sand with silt, trace of gravel, clay lumps & broken shell [SP-SM]	2½	9.6	0.024	Very Slow

NOTE: [] denotes Unified Soil Classification system designation.

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Lake Andrew Drive/Strom Park Subdivision
Viera, Brevard County, Florida

Universal Project No. 0330.1400095.0000
Limited Subsurface Exploration

SOIL STRATIGRAPHY

The results of our field exploration, together with pertinent information obtained from the auger borings are shown on the attached boring logs. A Key to Boring Logs, Soil Classification Chart is also included. The soil profiles were prepared from the field logs after the recovered soil samples were examined by a Geotechnical Engineer. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted.

GROUNDWATER CONDITIONS

The groundwater table at each borehole was measured on October 6 & 8, 2014, as shown on the attached boring logs. The groundwater levels encountered at the borehole locations ranged from depths of 2.5 feet bls at boring B4 to 4.4 feet bls at PZ1. Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, and other factors that may vary from the time the borings were conducted.

GENERAL QUALIFICATIONS

Boring logs were produced from the information obtained in the field and attached to this letter report for submittal to the client. Please note that no conclusions or recommendations are included in Universal's scope of work on this portion of the project.

Please note that this report is based on a limited subsurface exploration program with the general scope of services, boring locations and depths as directed by the client. The information submitted in this report is based on data obtained from the soil borings performed at the locations indicated on the attached Boring Location Plan and from other information as referenced. Since the scope of work for this project only included data transmission of the obtained information, no recommendations are included with this limited report. We cannot be held responsible for the conclusion or interpretations of this data made by others.

This report does not reflect any variations which may occur across the site. The nature and extent of such variations may not become evident until the course of future explorations or actual construction. If variations then become evident, it will be necessary for re-evaluation of the recommendations in this report after performing on-site observations during the construction period and noting the characteristics of any variations.

Deleterious soils were not encountered at the boring locations; however, we cannot completely preclude their presence. Therefore this report should not be used for estimating such items as cut and fill quantities.

Our field exploration did not find unsuitable or unexpected materials at the time of occurrence. However, borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, Universal does not recommend relying on our boring information to negate presence of anomalous materials or for

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Lake Andrew Drive/Strom Park Subdivision
Viera, Brevard County, Florida

Universal Project No. 0330.1400095.0000
Limited Subsurface Exploration

estimation of material quantities unless our contracted services **specifically** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect such anomalous conditions or estimate such quantities. Therefore, Universal will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.


All users of this report are cautioned that there was no requirement for Universal to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that may exist at the site during the course of this exploration. Therefore no attempt was made by Universal to locate or identify such concerns. Universal cannot be responsible for any buried man-made objects or environmental hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

For a further description of the scope and limitations of this report please review the document attached within Exhibit 1 "Important Information About Your Geotechnical Engineering Report" prepared by the ASFE/Professional Firms Practicing in the Geosciences.

CLOSURE

We appreciate the opportunity to have worked with you on this phase of the project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Sincerely yours,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 548


10-27-2014

Brad Faucet, M.S. P.E.
Regional Engineer
Florida Professional Engineer No. 33123

2 - Client

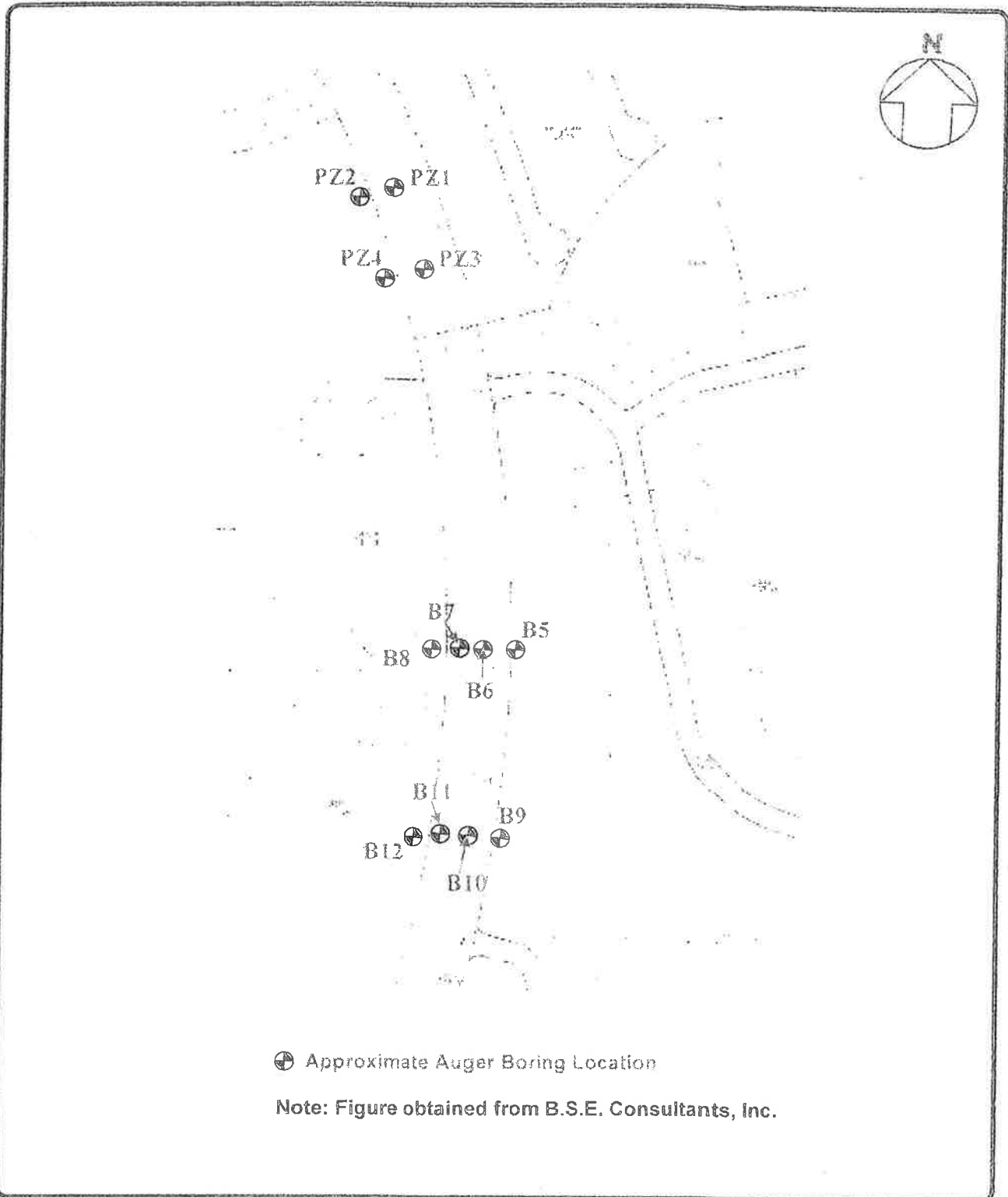
Attachments

UES DOCS# 1170912

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Figures

**EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)**



⊕ Approximate Auger Boring Location

Note: Figure obtained from B.S.E. Consultants, Inc.



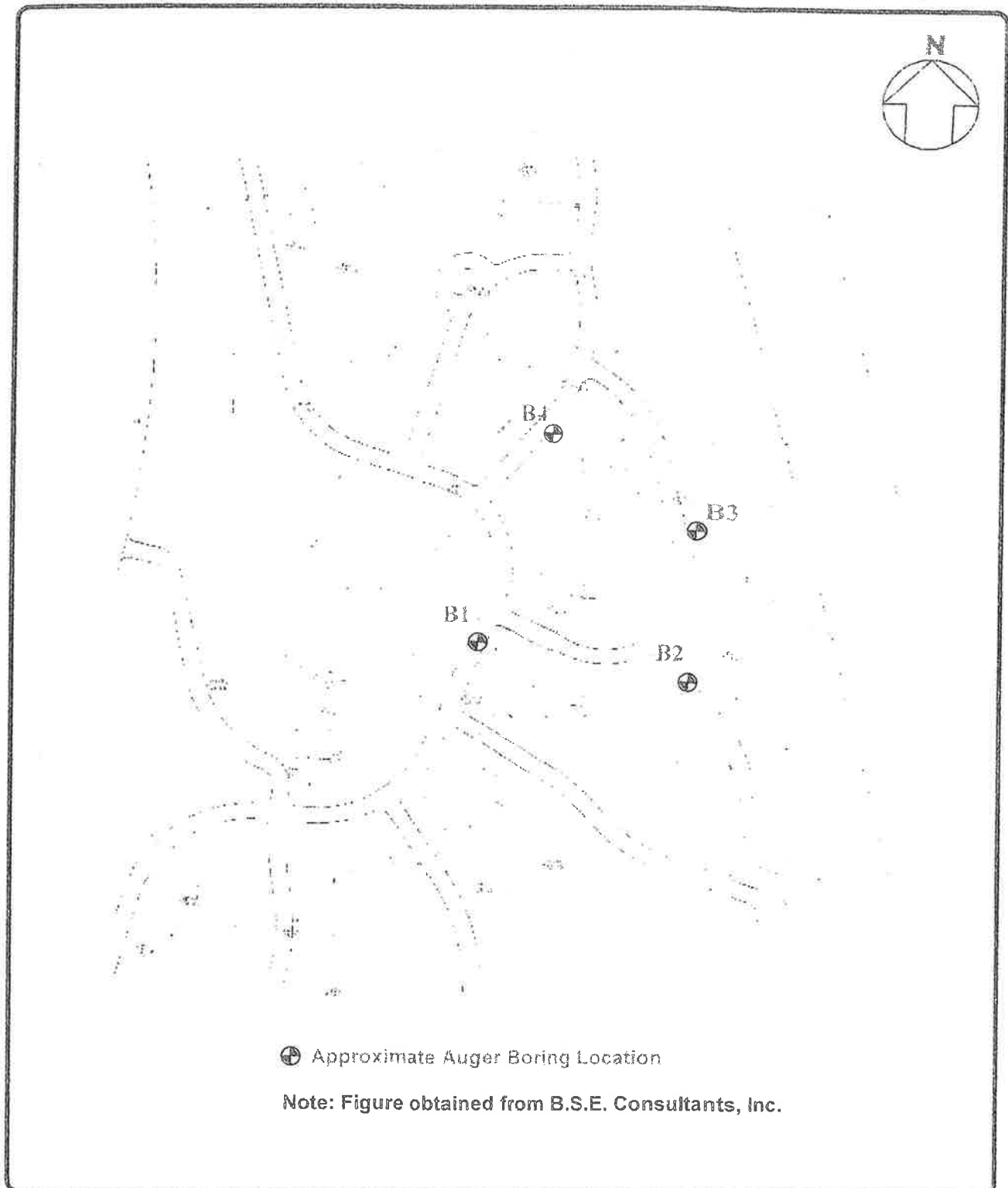
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LAKE ANDREW DRIVE/STROM PARK
VIERA, FLORIDA

BORING LOCATION PLAN

DRAWN BY	JRB	DATE	10/10/2014	CHECKED BY	BF	DATE	10/10/2014
SCALE	NTS	PROJECT NO.	0330.1400095.0000	REPORT NO.		PAGE NO.	Figure No.: 1

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



⊕ Approximate Auger Boring Location

Note: Figure obtained from B.S.E. Consultants, Inc.



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LAKE ANDREW DRIVE/STROM PARK
VIERA, FLORIDA

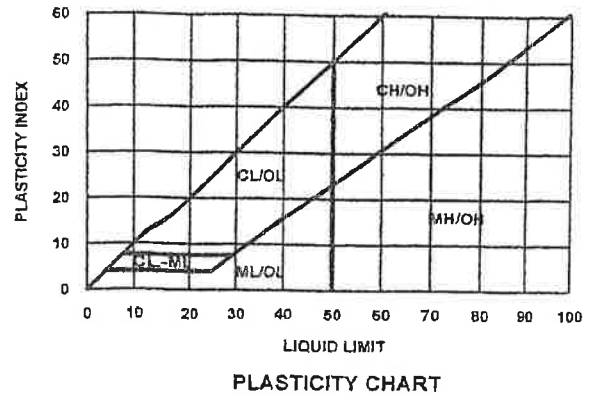
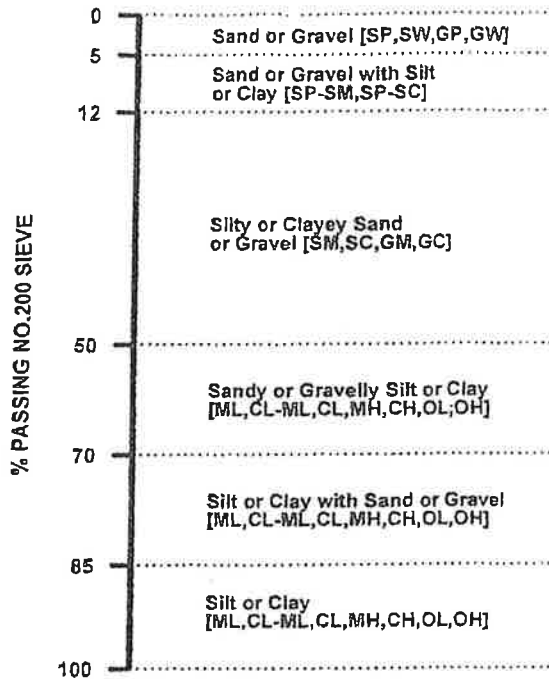
BORING LOCATION PLAN

DRAWN BY	JRB	DATE	10/10/2014	CHECKED BY	BF	DATE	10/10/2014
SCALE	NTS	PROJECT NO	0330.1400095.0000	REPORT NO		PAGE NO	Figure No.: 2

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Appendix A

KEY TO BORING LOGS SOIL CLASSIFICATION CHART*



GROUP NAME AND SYMBOL

COARSE GRAINED SOILS

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

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.

NOTES:

8* - DENOTES DYNAMIC CONE PENETROMETER (DCP) VALUE.
R - DENOTES REFUSAL TO PENETRATION.
P - DENOTES PENETRATION WITH ONLY WEIGHT OF DRIVE HAMMER.
N/E - DENOTES GROUNDWATER TABLE NOT ENCOUNTERED.



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0330.1400095 0000
REPORT NO.:	
APPENDIX:	A

PROJECT: Strom Park Subdivision Roadways

BORING DESIGNATION: **B1**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

Viera, Florida

CLIENT: BREVARD COUNTY PUBLIC WORKS

G.S. ELEVATION (ft):

DATE STARTED: 10/6/14

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 2.8

DATE FINISHED: 10/6/14

REMARKS:

DATE OF READING: 10/6/2014

DRILLED BY: PM, ZG

EST. W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						LIMEROCK						
		4-15-23	15*									
		7-28-R	28*			fine SAND with silt, trace of gravel & clay lumps (fill), gray, [SP-SM]						
		10-9-10	9*	▼			3.9	19.0				
		6-10-14	10*			fine SAND with silt, brown, [SP-SM]						
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

BL3



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0330.1400095.0000
REPORT NO.:	
APPENDIX:	A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B2**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 WATER TABLE (ft): 3.9
 DATE OF READING: 10/6/2014
 EST. W.S.W.T (ft):
 DATE STARTED: 10/6/14
 DATE FINISHED: 10/6/14
 DRILLED BY: PM, ZG
 TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						LIMEROCK						
		R	R*									
		14-16-20	16*			fine SAND with silt, trace of gravel, clay lumps & broken shell (fill), brown, [SP-SM]	3.8	9.1				
		9-9-10	9*									
		3-3-4	3*									
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000

REPORT NO.:

APPENDIX: A

PROJECT: Strom Park Subdivision Roadways

BORING DESIGNATION: **B3**

SHEET: **1 of 1**

Viera, Florida

SECTION: TOWNSHIP:

RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS

G.S. ELEVATION (ft):

DATE STARTED: 10/6/14

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 2.6

DATE FINISHED: 10/6/14

REMARKS:

DATE OF READING: 10/8/2014

DRILLED BY: PM, ZG

EST. W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND, trace of silt & broken shell (fill), brown, [SP]						
		1-2-2	2*									
		2-2-2	2*				2.4	15.5				
		2-3-5	3*	▽								
		6-7-8	7*									
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
10												

BL3

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/ THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG



PROJECT NO.: 0330.1400095.0000

REPORT NO.:

APPENDIX: A

PROJECT: Strom Park Subdivision Roadways

BORING DESIGNATION: **B4**

SHEET: 1 of 1

Viera, Florida

SECTION: TOWNSHIP:

RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS

G.S. ELEVATION (ft):

DATE STARTED: 10/6/14

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 2.5

DATE FINISHED: 10/6/14

REMARKS:

DATE OF READING: 10/8/2014

DRILLED BY: PM, ZG

EST. W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		4-8-9	8*			fine SAND with silt, trace of broken shell (fill), brown, [SP-SM]						
		3-5-6	5*									
		7-11-17	11*	▽								
		13-18-21	18*			fine SAND with silt, brown, [SP-SM]	4.5	13.5				
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
10												

BL3



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000
 REPORT NO.:
 APPENDIX: A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B5**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 WATER TABLE (ft): 3.9
 DATE OF READING: 10/8/2014
 EST. W.S.W.T. (ft):
 DATE STARTED: 10/7/14
 DATE FINISHED: 10/7/14
 DRILLED BY: PM, ZG
 TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	ORG. CONT. (%)
									LL	PI		
0												
		11-15-17	15*			fine SAND with silt, trace of roots, gravel & broken shell (fill), dark brown, [SP-SM]						
		18-26-R	26*			fine SAND with silt, trace of clay lumps & gravel (fill), gray, [SP-SM]						
		22-25-30	25*			fine SAND with silt, dark brown, [SP-SM]						
		16-28-R	28*			fine SAND, brown, [SP]	3.4	12.5				
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

BL3



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0330.1400095.0000
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APPENDIX:	A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B6**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 WATER TABLE (ft): 4.1
 DATE OF READING: 10/8/2014
 EST. W.S.W.T. (ft):
 DATE STARTED: 10/7/14
 DATE FINISHED: 10/7/14
 DRILLED BY: PM, ZG
 TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND, trace of clay lumps (fill), brown, [SP]						
		4-6-9	6*									
		9-14-20	14*				2.1	14.6				
		7-14-21	14*			fine SAND with silt, trace of roots (topsoil), dark brown, [SP-SM]						
		17-19-22	19*			fine SAND, brown, [SP]						
5						BORING TERMINATED AT 4.5' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
10												

BL3

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330 1400095.0000
REPORT NO.:
APPENDIX: A

PROJECT: Strom Park Subdivision Roadways
Viera, Florida

BORING DESIGNATION: **B7**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 3.9
DATE OF READING: 10/8/2014
EST. W.S.W.T. (ft):
DATE STARTED: 10/7/14
DATE FINISHED: 10/7/14
DRILLED BY: PM, ZG
TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		9-9-12	9*			fine SAND, occasional trace of broken shell & clay lumps (fill), brown, [SP]						
		9-14-14	14*				3.2	14.3				
		5-11-10	11*									
		3-4-5	4*			fine SAND, brown, [SP]						
						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
5												
10												

BLS

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.140095.0000

REPORT NO.:

APPENDIX: A

PROJECT: Strom Park Subdivision Roadways

BORING DESIGNATION: **B8**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

Viera, Florida

CLIENT: BREVARD COUNTY PUBLIC WORKS

G.S. ELEVATION (ft):

DATE STARTED: 10/7/14

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 3.4

DATE FINISHED: 10/7/14

REMARKS:

DATE OF READING: 10/8/2014

DRILLED BY: PM, ZG

EST W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT (%)
									LL	PI		
0												
		2-4-5	4*			fine SAND with silt, trace of roots & gravel (fill), dark brown, [SP-SM]						
		13-16-16	16*			fine SAND, grey, [SP]						
		7-8-8	8*				3.2	11.0				
		2-1-1	1*									
						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
5												
10												



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000
 REPORT NO.:
 APPENDIX: A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B9**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 WATER TABLE (ft): 3.6
 DATE OF READING: 10/8/2014
 EST W.S.W.T. (ft):
 DATE STARTED: 10/7/14
 DATE FINISHED: 10/7/14
 DRILLED BY: PM, ZG
 TYPE OF SAMPLING:

DEPTH (FT)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		6-8-10	8*			fine SAND, trace of broken shell & clay lumps (fill), brown, [SP]						
		6-6-9	6*									
		5-9-12	9*				3.3	12.9				
		5-19-22	19*	▼		fine SAND, brown, [SP]						
						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
5												
10												

BL3



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0330.1400095.0000
REPORT NO.:	
APPENDIX:	A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B10**
 SECTION: TOWNSHIP:

SHEET: **1 of 1**
 RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft):
 WATER TABLE (ft): 3.9
 DATE STARTED: 10/7/14
 DATE FINISHED: 10/7/14
 DATE OF READING: 10/8/2014
 DRILLED BY: PM, ZG
 EST. W.S.W.T. (ft):
 TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		6-7-8	7*			fine SAND with silt, trace of broken shell & clay lumps (fill), brown, [SP-SM]						
		9-9-12	9*									
		11-18-22	18*									
		15-20-22	20*			fine SAND, brown, [SP]	3.2	12.2				
						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
5												
10												

BL3

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000

REPORT NO.:

APPENDIX: A

PROJECT: Strom Park Subdivision Roadways

Viera, Florida

CLIENT: BREVARD COUNTY PUBLIC WORKS

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B11**

SECTION: TOWNSHIP:

SHEET: **1 of 1**

RANGE:

G.S. ELEVATION (ft):

DATE STARTED: 10/7/14

WATER TABLE (ft): 2.8

DATE FINISHED: 10/7/14

DATE OF READING: 10/8/2014

DRILLED BY: PM, ZG

EST. W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND, trace of silt & gravel (fill), brown, [SP]						
		6-10-11	10*									
		11-12-17	12*									
		18-23-R	23*	▼								
		23-R	R*				4.1	11.3				
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												



EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0330,1400095,0000
REPORT NO.:	
APPENDIX:	A

PROJECT: Strom Park Subdivision Roadways
 Viera, Florida

BORING DESIGNATION: **B12** SHEET: **1 of 1**
 SECTION: TOWNSHIP: RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS:

G.S. ELEVATION (ft): DATE STARTED: 10/7/14
 WATER TABLE (ft): 3.3 DATE FINISHED: 10/7/14
 DATE OF READING: 10/8/2014 DRILLED BY: PM, ZG
 EST. W.S.W.T. (ft): TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		4-6-7	6*			fine SAND with silt, trace of roots & gravel (fill), dark brown, [SP-SM]						
		5-13-17	13*			fine SAND with silt, trace of broken shell & clay lumps (fill), gray, [SP-SM]						
		8-R	R*			fine SAND, brown, [SP]						
		6-15-18	15*				3.2	13.9				
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

BL3

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000

REPORT NO.:

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PROJECT: Strom Park Subdivision Roadways
Viera, Florida

BORING DESIGNATION: **PZ1**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 4.4
DATE OF READING: 10/8/2014
EST. W.S.W.T. (ft):
DATE STARTED: 10/7/14
DATE FINISHED: 10/7/14
DRILLED BY: PM, ZG
TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND with silt, trace of roots (fill), dark brown, [SP-SM]						
		27-R	R*									
		10-R	R*			fine SAND with silt & gravel (fill), gray, [SP-SM]						
		12-17-19	17*			fine SAND with clay, gravel & concrete fragments (fill), grey, [SP-SC]	9.4	10.5				
		6-11-15	11*			fine SAND, grey, [SP]	2.6	14.0				
5						BORING TERMINATED AT 4.5' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

BLS

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000
REPORT NO.:
APPENDIX: A

PROJECT: Strom Park Subdivision Roadways
Viera, Florida

BORING DESIGNATION: **PZ2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft): DATE STARTED: 10/7/14
WATER TABLE (ft): 3.8 DATE FINISHED: 10/7/14
DATE OF READING: 10/8/2014 DRILLED BY: PM, ZG
EST. W.S.W.T. (ft): TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND with silt, trace of gravel, clay lumps & broken shell (fill), gray, [SP-SM]						
		6-9-10	9*									
		7-13-11	13*				5.2	13.5				
		6-5-5	5*									
5						BORING TERMINATED AT 3.8' - Encountered Pipe * DYNAMIC CONE PENETROMETER (DCP) VALUES						
10												

BL3

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000

REPORT NO.:

APPENDIX: A

PROJECT: Strom Park Subdivision Roadways

BORING DESIGNATION: **PZ3**

SHEET: **1 of 1**

Viera, Florida

SECTION: TOWNSHIP:

RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS

G.S. ELEVATION (ft):

DATE STARTED: 10/7/14

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 4.2

DATE FINISHED: 10/7/14

REMARKS:

DATE OF READING: 10/8/2014

DRILLED BY: PM, ZG

EST. W.S.W.T. (ft):

TYPE OF SAMPLING:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						fine SAND with silt, trace of gravel, clay lumps & broken shell (fill), brown, [SP-SM]						
		7-R	R*									
		22-R	R*									
		R	R*				5.3	8.3				
		23-R	R*			fine SAND, grey, [SP]						
5						BORING TERMINATED AT 4.5' * DYNAMIC CONE PENETROMETER (DCP) VALUES R - DENOTES REFUSAL TO PENETRATION WITH DYNAMIC CONE PENETROMETER.						
10												

EXHIBIT B

ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)



UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 0330.1400095.0000
REPORT NO.:
APPENDIX: A

PROJECT: Strom Park Subdivision Roadways
Viera, Florida

BORING DESIGNATION: **PZ4** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: BREVARD COUNTY PUBLIC WORKS
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft): DATE STARTED: 10/7/14
WATER TABLE (ft): 3.6 DATE FINISHED: 10/7/14
DATE OF READING: 10/8/2014 DRILLED BY: PM, ZG
EST. W.S.W.T. (ft): TYPE OF SAMPLING:

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
		1-1-3	1*			fine SAND with silt, trace of gravel, clay lumps & broken shell (fill), gray, [SP-SM]						
		5-8-10	8*									
		5-8-6	8*				9.6	13.0				
		8-12-19	12*	▼		fine SAND, grey, [SP]						
5						BORING TERMINATED AT 4' * DYNAMIC CONE PENETROMETER (DCP) VALUES						
10												

BL3

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

Exhibit

Important Information about Your Geotechnical Engineering Report

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

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

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

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

Read the Full Report

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

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

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

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

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

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

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

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

Subsurface Conditions Can Change

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

Most Geotechnical Findings Are Professional Opinions

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

A Report's Recommendations Are *Not* Final

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

EXHIBIT B
ROADWAY REMEDIAL ACTION AGREEMENT (W/THE VIERA COMPANY)

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

A Geotechnical Engineering Report Is Subject to Misinterpretation

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

Do Not Redraw the Engineer's Logs

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

Give Contractors a Complete Report and Guidance

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

Read Responsibility Provisions Closely

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

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

Geoenvironmental Concerns Are Not Covered

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

Obtain Professional Assistance To Deal with Mold

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

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

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

ASFE THE GEOPROFESSIONAL
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