

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

November Session of the October Adjourned

Term. 20 17

County of Boone

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In the County Commission of said county, on the

2nd

day of

November

20

17

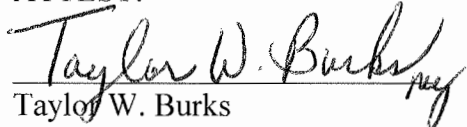
the following, among other proceedings, were had, viz:

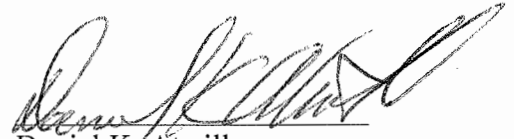
Now on this day the County Commission of the County of Boone does hereby approve the attached Consultant Services Agreement with Crockett Geotechnical Testing Lab.

The terms of the Agreement are stipulated in the attached Agreement. It is further ordered the Presiding Commissioner is hereby authorized to sign said Consultant Services Agreement.


Done this 2nd day of November, 2017.

ATTEST:

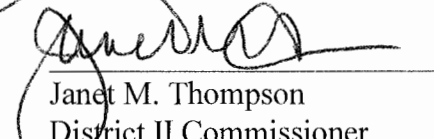

Taylor W. Burks
Clerk of the County Commission


Daniel K. Atwill

Presiding Commissioner


Fred J. Parry

District I Commissioner


Janet M. Thompson

District II Commissioner

APPROVAL OF PROPOSAL FOR CONSULTANT SERVICES

Effective the _____ day of November, 2017, Boone County, Missouri, a political subdivision of the State of Missouri through its County Commission (herein "Owner") hereby approves and authorizes professional services by the Consultant referred to below for the services specified herein.

Consultant Name: Crockett Geotechnical - Testing Lab, LLC, 1000 W. Nifong Blvd, Bldg 1, Columbia, MO 65203

Project/Work Description: Borings, testing and geotechnical report delivered by December 31, 2017 as described in the attached Request for Proposal - Site Investigation Services.

Proposal Description: Work will be performed as described in the attached proposal for Street Rehab- El Chaparral Subdivision including all items requested in the attached Request for Proposal including the report submission deadline of December 31, 2017; provided notice to proceed is given by November 13, 2017. Crockett Geotechnical Testing Lab, LLC agrees to release Boone County Resource Management from item number 7 Ownership of Documents on their General Provisions and allow Boone County Resource Management to share the results of the tests as necessary to complete the proposed rehabilitation project.

Modifications to Proposal: Fees and expenses shall not exceed \$8,015.00 (Eight thousand fifteen dollars) without prior written approval of Owner.

This form agreement and any attachments to it shall be considered the approved proposal; signature by all parties below constitutes a contract for services in accordance with the above described proposal and any approved modifications to the proposal, both of which shall be in accordance with the terms and conditions of the General Consultant Services Agreement signed by the Consultant and Owner for the current calendar year on file with the Boone County Resource Management Department, which is hereby incorporated by reference. Performance of Consultant's services and compensation for services shall be in accordance with the approved proposal and any approved modifications to it and shall be subject to and consistent with the General Consultant Services Agreement for the current calendar year. In the event of any conflict in interpretation between the proposal approved herein and the General Consultant Services Agreement, or the inclusion of additional terms in the Consultant's proposal not found in the General Consultant Services Agreement, the terms and conditions of the General Consultant Services Agreement shall control unless the proposal approved herein specifically identifies a term or condition of the General Consultant Services Agreement that shall not be applicable or this Approval of Proposal indicates agreement with a specific term or terms of Consultant's proposal not found in the General Consultant Services Agreement.

CROCKETT GEOTECHNICAL TESTING LAB, LLC

BOONE COUNTY, MISSOURI

By Eric A. Tolsted

By [Signature]

Title PRINCIPAL

Presiding Commissioner

Dated: 10-30-17

Dated: 11/2/17

APPROVED AS TO FORM:

ATTEST:

[Signature]
County Attorney

Taylor W. Burk
County Clerk

APPROVED:

Certification:

[Signature]
Resource Management Director

I certify that this contract is within the purpose of the appropriation to which it is to be charged and there is an unencumbered balance of such appropriations sufficient to pay the costs arising from this contract.

Janet E. Pritchard 10/31/17 2041-71101
Auditor by [Signature] Date

REQUEST FOR PROPOSAL – SITE INVESTIGATION SERVICES

Project: Street Rehab-El Chaparral Subdivision

The Boone County Resource Management Department (BCRM) plans to perform rehab projects on the concrete streets in the El Chaparral Subdivision. A map of the neighborhood and approximate location of proposed boring sites is attached.

Street Rehab projects such as these typically involve the phased removal of all the concrete pavement in a neighborhood; and its replacement with base rock and new pavement. In previous years, the underlying subgrade has been unpredictable and in places unsuitable subgrade had to be removed and replaced with rock to stabilize it during construction. What BCRM seeks is a better understanding of the existing subgrade characteristics, to provide an adequate design and avoid change orders.

SCOPE OF WORK

The consultant shall provide the necessary services, including but not limited to:

1. Provide County with an itemized cost estimate for the following proposed work. Wages and costs found in the estimate shall be consistent with the wages and costs submitted to the County as part of the 2017 Consultant Services Agreement.
2. County wishes work to commence as soon as practical, with report delivery no later than **December 31st, 2017**.
3. Award will be given based on price and ability to meet report delivery deadline.
4. Core existing concrete pavement and conduct soil sampling and characterization (USCS) to a depth of roughly 5' to evaluate subgrade. Sampling should be done in the approximate locations as specified on the map.
5. Soil samples shall be taken at depths of roughly 1.5' and 4' using a thin-walled tube. Lab test shall be conducted on these samples to determine dry unit weight, water content, and unconfined compressive strength (laboratory).
6. Based on results from unconfined compressive strength tests from samples taken near 1.5' depth, consultant shall conduct additional tests. Additional tests may require additional material be taken from the thin-walled tube. These additional tests are as follows:

Combined Particle Analysis (Sieve & Hydrometer) (3 total tests, for 1.5' depth layer)

- 1 test from worst UCS found for Borings #1-10
- 1 test from worst UCS found for Borings #11-16
- 1 test from worst UCS found for Borings #17-24

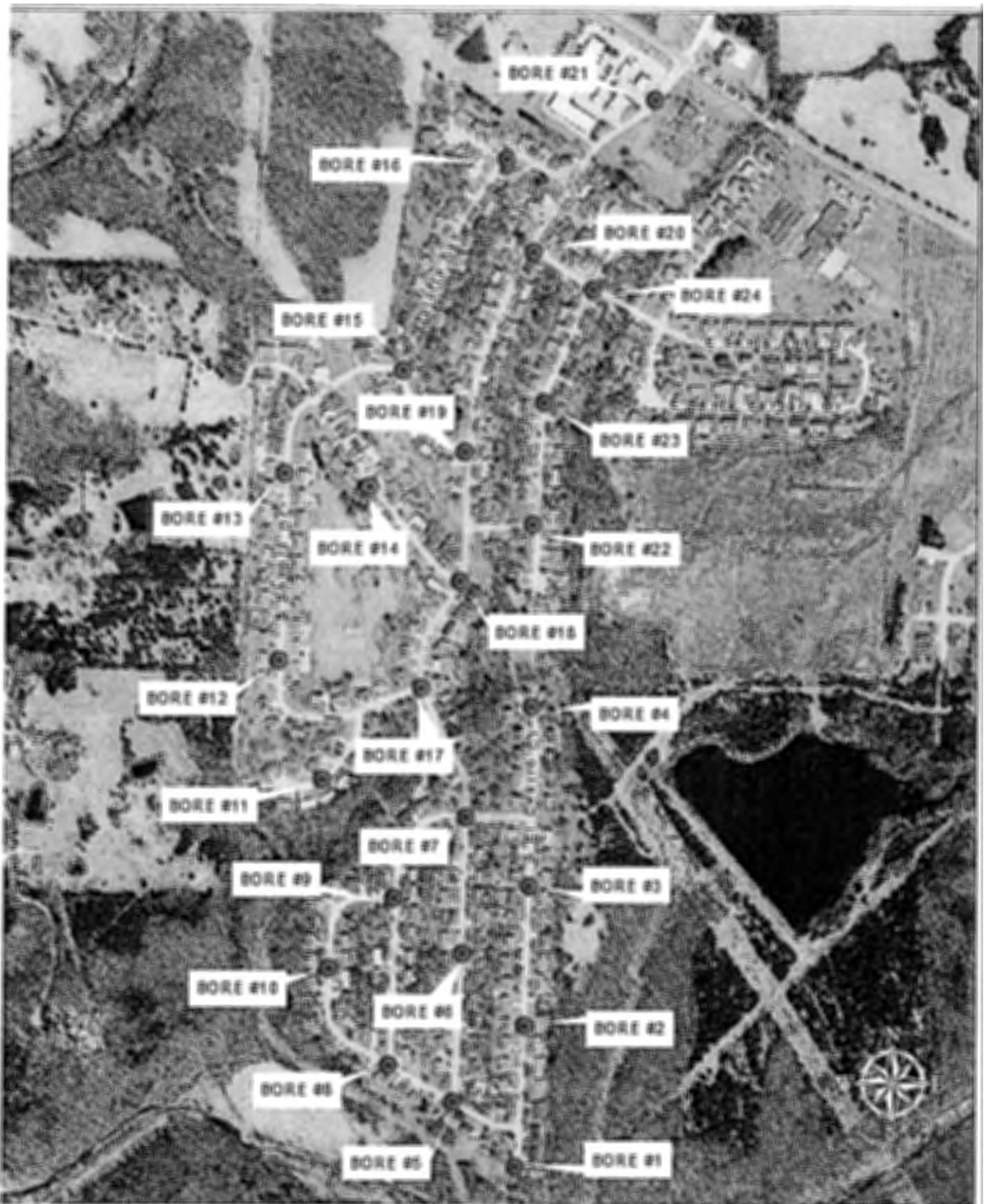
Atterberg Limits, LL-PL-PI (12 total tests, for 1.5' depth layer)

- 2 worst UCS found for Borings #1-10

- 2 best UCS found for Borings #1-10
 - 2 worst UCS found for Borings #11-16
 - 2 best UCS found for Borings #11-16
 - 2 worst UCS found for Borings #17-24
 - 2 best UCS found for Borings #17-24
7. The consultant shall supply to the County an estimated California Bearing Ratio (CBR) range, along with recommended design CBR value, for the existing subgrade (i.e. Estimated CBR=2-4, Recommended Design CBR=2). Means and methods used to estimate CBR will be at the consultant's discretion, with mind towards economy and results reliability. Estimated CBR shall be found at every bore location at the two approximate depths as described in Item 5.
8. Deliver to the County a typed report containing the following:
- Soil strata encountered (USCS)
 - Sampling intervals
 - Results of dry density, water content, and unconfined compressive strength tests
 - Results from sieve analysis tests
 - Results from Atterberg limits tests
 - Estimated CBR range and recommended CBR design value at each bore location
 - Indicate means and methods used in determining CBR values. Include name of tests, results from tests, correlations used, and any other information key to recommending design CBR.
9. The County will request a meeting with the consultant after the County has received and reviewed final report. The purpose of the meeting will be to discuss findings of report. Consultants shall account for a 2-hour meeting in the cost estimate for the proposal.

Questions regarding the contents of the Request for Proposal should be directed to:

Micah Taylor, P.E.
Boone County Resource Management
Engineering Division
(573) 886-4480
mtaylor@boonecountymo.org





PROFESSIONAL SERVICES AGREEMENT
GEOTECHNICAL ENGINEERING SERVICES

THIS AGREEMENT, by and between Boone County hereinafter referred to as the CLIENT, and Crockett Geotechnical - Testing Lab, LLC, 1000 W. Nifong Blvd, Building 1., Columbia, Missouri 65203, hereinafter referred to as the ENGINEER.

WITNESSETH:

PROJECT: The CLIENT hereby contracts with the ENGINEER to perform the following described services, hereinafter collectively referred to as the PROJECT:

Street Rehab - El Chaparral Subdivision
Columbia, Missouri

Site and Project Information:

Site Location:

Item	Description
Location	El Chaparral Subdivision in Columbia, Missouri.
Existing improvements	Existing pavement
Existing topography	Sloping.

Project Scope:

Item	Description
Proposed Borings	24 borings are planned at locations specified by BCRM. These borings will require soil sampling to depths of about 5 feet or auger refusal, whichever occurs first.
Sampling	Sampling will be in general accordance with industry standards in which 2 samples will be obtained in the upper 5 feet of boring. Samples will be obtained using a thin-walled tube sampler or by using a split-barrel sampler if soil conditions are not conducive to using a thin-walled tube sampler..
Groundwater	Groundwater levels will be observed and recorded while drilling and at the completion of drilling. All borings will be backfilled prior to the drill crew departing the job site.
Laboratory Testing	The samples obtained from the borings will be tested in our laboratory to determine physical engineering characteristics. At the direction of BCRM, all soil samples will be tested for moisture content, dry density and unconfined compressive strength. In addition to these tests, 12 Atterberg limit tests and 3 combined hydrometer/sieve analysis tests will also be performed.
Field and Lab Test Results	The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of Missouri.

Utilities/Right of Entry to Site: We understand the property owner has provided right of entry for this project.

- We will contact the Missouri One Call Service (MOCS) for location of utilities in public easements.

CGTL will take reasonable efforts to reduce damage to the property. However, it should also be understood in the normal course of our work some such disturbance could occur. For safety purposes, the borings will be backfilled prior to leaving the job site. If there are any restrictions or special requirements regarding this site or exploration, these should be known prior to commencing field work.

Our fee is based on the site being accessible to a truck-mounted drill rig and CGTL providing layout of the borings.

Geotechnical Engineering Report: A geotechnical engineer licensed in the State of Missouri will evaluate field and laboratory program results prepare an engineering report that details the results of the field and laboratory testing performed. The geotechnical engineering report will include:

- Boring logs
- Laboratory test results
- Groundwater levels observed during and at completion drilling
- Boring location plan
- Subsurface exploration procedures
- General subgrade preparation/earthwork recommendations
- Estimated CBR values based on lab test correlations
- Provide design CBR value based upon the above field and lab test correlations
- Meet with BCRM to discuss results

Fee: Our lump sum fee for the previously outlined scope of services is \$8,015. Attached to this proposal is a unit-rate breakdown of how we arrived at this lump sum fee.

Authorization: We request we be authorized to proceed, in writing or by email. Acceptance of our proposal will be considered permission by the CLIENT to begin our services.

ENGINEER'S COMPENSATION: The ENGINEER shall be paid for all services rendered on a fixed fee basis. The billing for our services will occur after the geotechnical engineering report has been provided to the client.

CLIENT'S AGENT: The CLIENT has appointed Mr. Micah Taylor, P.E. as the official AGENT of the CLIENT for the purpose of the PROJECT. As such, the AGENT shall be the contact person for this PROJECT and shall be responsible for the coordination/execution of any document pertaining to this AGREEMENT or any amendment thereto, and for approving all change orders, addenda, and additional services to be performed by the ENGINEER.

GENERAL PROVISIONS: See following page.

SPECIAL PROVISIONS: The CLIENT and the ENGINEER mutually agree that this AGREEMENT shall be subject to the following special provisions which, together with the General Provisions hereof and the exhibits hereto, represent the entire AGREEMENT between the CLIENT and the ENGINEER.

IN WITNESS WHEREOF, the parties hereto have made and executed this AGREEMENT.

CLIENT: _____

ENGINEER: Crockett Geotechnical - Testing Lab, LLC

By: _____

By: Eric H. Lidholm, PE

Eric H. Lidholm

Title: _____

Date: October 26, 2017

GENERAL PROVISIONS

1. ADDITIONAL SERVICES: During the performance of the services in connection with this PROJECT, the CLIENT may from time to time request additional services. The ENGINEER shall be compensated for such additional services on the basis of the normal fee schedule of the ENGINEER. In addition, reimbursable expenses will be billed to the CLIENT at cost.
2. PAYMENT OF ACCOUNT: During the performance of services under this AGREEMENT, the ENGINEER will submit an invoice near the end of each month to the CLIENT for services rendered to date. Invoices shall be payable within 30 days after the invoice date. Interest may be charged on the unpaid balance of any invoice not paid within thirty (30) days after the receipt thereof, at the rate of 12% per annum until paid in full. In the event that any invoice or any portion thereof shall remain unpaid for a period of thirty (30) days after the date of the invoice, the ENGINEER may, without waiving any claim or right against the CLIENT, and without liability whatsoever to the CLIENT, suspend the performance of services under this AGREEMENT until all invoices issued prior thereto have been paid in full. The CLIENT shall pay all costs of collection, including reasonable attorney's fees.
3. TERMINATION: This AGREEMENT may be terminated by either party by seven (7) days written notice in the event of a substantial failure to perform in accordance with the terms hereof by one party, through no fault of the other party. In the event of termination by the ENGINEER in accordance with this paragraph, the ENGINEER shall be compensated as provided for in paragraph 4 hereof.
4. COMPENSATION - TERMINATION OR DELAY: If any phase of the PROJECT is suspended for more than three (3) months, or abandoned after written notice from the CLIENT, or if the AGREEMENT is terminated for any reason any time prior to the completion of the PROJECT, the ENGINEER shall be paid for services performed prior to termination, together with any reimbursable expense and any actual out-of-pocket costs incurred by the ENGINEER as a result of said termination.
5. INDEMNIFICATION: The CLIENT shall indemnify and hold harmless the ENGINEER and all of its personnel from and against any and all claims, damages, losses and expenses (including reasonable attorney's fees) arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense is caused in whole or in part by the negligent act, omission, and/or strict liability of the CLIENT, anyone directly or indirectly employed by the CLIENT or anyone for whose acts any of them may be liable. In the event that the CLIENT undertakes the performance of the responsibilities of the construction phase, or any portion thereof or retains the services of any third party to carry out any of these responsibilities, the CLIENT agrees to indemnify, save and hold the ENGINEER harmless from liability for any and all claims, causes of action, debts, judgments, attorneys' fees and costs arising out of the negligent acts or omissions of the CLIENT, its officers, agents or employees, or any party hired by the CLIENT to perform said responsibilities, during the performance of any phase of the work undertaken by the CLIENT.
6. RISK ALLOCATION: In recognition of the relative risks, rewards and benefits of the PROJECT to both the CLIENT and the ENGINEER the risks have been allocated such that the CLIENT agrees that, to the fullest extent permitted by law, the ENGINEER'S total liability to the CLIENT for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this AGREEMENT from any cause or causes, shall not exceed ten times the amount of the ENGINEER'S fees or one million dollars, whichever is less. Such causes include, but are not limited to, the ENGINEER'S negligence, errors, omissions, strict liability, or breach of contract.
7. OWNERSHIP OF DOCUMENTS: All documents produced by the ENGINEER under this AGREEMENT, including digital files, shall remain the property of the ENGINEER and may not be used by the CLIENT for any other endeavor without the written consent of the ENGINEER.
8. DEFINITIONS: "Reimbursable Expenses" shall mean the actual expense of transportation and subsistence of principals and employees while traveling in connection with the PROJECT, toll telephone calls and telegrams, reproduction of reports, drawings and specifications, and all other PROJECT related items.

PROPOSAL WORKSHEET

Street Rehab
 El Chaparral Subdivision
 Columbia, MO

DRILLING / FIELD

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Cost</i>	<i>Expansion</i>	<i>Subtotal</i>
IPES Contract Drilling Services	1	lump sum	\$3,500.00	\$ 3,500.00	
		lump sum	Cost+15%	\$ -	\$ 3,500.00

LABORATORY

Unconfined Compression	48	test	\$8.00	\$ 384.00	
Dry Density	48	test	\$12.00	\$ 576.00	
Moisture Content	48	test	\$10.00	\$ 480.00	
Atterberg Limits	12	test	\$55.00	\$ 660.00	
Hydrometer/Sieve Analysis (Combined)	3	test	\$105.00	\$ 315.00	\$2,415

MISCELLANEOUS

Utility Locate	4	hour(s)	\$100.00	\$ 400.00	\$400
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PROFESSIONAL STAFF - REPORT/REVIEW

Clerical	2	hour(s)	\$50.00	\$ 100.00	
Professional II	12	hour(s)	\$90.00	\$ 1,080.00	
Professional V	4	hour(s)	\$130.00	\$ 520.00	\$ 1,700.00

TOTALS \$ 8,015.00