

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2018-0015**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and GEOTEK ENGINEERING COMPANY, INC. hereinafter referenced as Consultant, who mutually agree as follows:

DECLARATIONS. City desires to retain Consultant to provide engineering, related technical, and other services in connection with City's project hereinafter referenced as Project. The Project is described as follows:

Chestnut Bend Geotechnical Investigation of Settlement Areas

1. SCOPE OF SERVICES. Consultant shall provide engineering related technical services for the Project in accordance with the Scope of Services (Services) as found in Attachment A which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed based on the Fee Schedule as contained in Attachment A in the Amount of **SEVENTEEN THOUSAND FIVE HUNDRED AND NO/100 DOLLARS (\$17,500.00)**.

The City Administrator Approved this Agreement on the 20TH day of MARCH 2018 under the Authority Granted by the Franklin Board of Mayor and Aldermen by Resolution 2012-05.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 **ALLOCATION OF RISK AND LIABILITY; GENERAL.** Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.

3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.

- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

ARTICLE 4. TERMINATION BY THE CITY. The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:

- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
- (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
- (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
 - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 5. SCOPE OF SERVICES. Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 **ENVIRONMENTAL RESPONSIBILITY.**

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

ARTICLE 6. SCHEDULE.

6.1 **TIME OF THE ESSENCE.** The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 **FORCE MAJEURE.** Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

ARTICLE 7. USE OF DOCUMENTS, DATA.

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. Consultant shall retain an ownership and property interest therein (including the right of reuse at the discretion of the Consultant) whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: Ownership, property interests and proprietary rights in data systems used by Consultant do not extend to the data created by or supplied to Consultant by the City; all rights to that data (including derivative or hidden data such as metadata) shall vest solely in City at the moment of creation.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer

hardware differing from that as required of, and used by, Consultant at the beginning of this Project.

- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

ARTICLE 8. INSURANCE.

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
 - a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
 - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
 - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

ARTICLE 9. PAYMENT.

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.

- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 TRAVEL; EXPENSES
City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at www.gsa.gov [click on 'per diem rates' under the 'etools' category].

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

ARTICLE 11. EXTENT OF AGREEMENT:

- 11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this

Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.

- 11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

ARTICLE 12. DISPUTE RESOLUTION, BREACH.

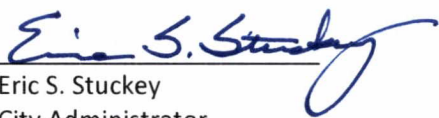
- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

ARTICLE 13. SURVIVAL.

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

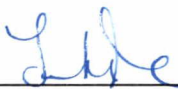
BY: 

Consultant's Signature John Rami Mishu
TITLE: President
Date: March 9, 2018

BY: 

Eric S. Stuckey
City Administrator
Date: 3/20/18

Approved as to Form:



Tiffani M. Pope, Staff Attorney

GEOTEK

Geotek Engineering Company, Inc. • 2909 Elizabeth Street • Nashville, Tennessee 37211-2302
(615) 833-3800 • Fax (615) 833-4097

January 31, 2018

City of Franklin – Engineering Department
109 Third Avenue South
Franklin, TN 37064

ATTN: David Hodnett

**SUBJ: Chestnut Bend HOA - Subsidence Issue
Franklin, Tennessee**

Dear Mr. Hodnett:

Presented herein is our proposal to study the areas of subsidence in the Chestnut Bend subdivision. These areas lie in drainage easements generally behind several homes in 3 separate areas. We understand that these areas have been experiencing excessive settlement. You have requested that we evaluate these areas to determine the probable cause of the settlement and to make recommendations for stabilization/repair. We propose a phased approach to this study.

Phase 1 will consist of two tasks. One task includes opening several **test pits**. The second test involves conducting a relatively low-cost **geophysical “GPR” survey**.

Test Pits. We propose to open 11 test pits in the approximate locations shown in the attached drawing. Notice that we added a test pit in one area you hadn't identified where we saw a surface depression. The test pits will be opened using an excavator (e.g., trackhoe) to dig a narrow trench to a depth of 15 feet, unless actual conditions dictate a shallower depth. Some yard disturbance caused by access as well as by the actual test-pit excavations is likely. Typically, we backfill the test-trench with the same material that we removed, and then smoothen the surface and apply seed and straw. Sometimes, we have to import topsoil to level off rutted areas. We will hire a local landscape contractor to make these necessary landscape repairs. Because the ground appears to be settling, seems unstable, and potentially “fragile”, please realize that even after we make these landscape repairs, some future subsidence is possible. We cannot accept responsibility for this possibility.

Geophysical GPR Survey. We propose to perform a geophysical survey using the Ground Penetrating Radar (GPR) method. This relatively low-cost survey method is generally good at identifying shallow anomalies caused by the presence of buried debris, buried organics, or extreme changes in shallow soil types. GPR is not so good at determining what the anomalies are nor the depth of such anomalies. GPR is also not good at identifying sinkholes. But given its relatively low cost and the initial suspicion that buried fill/debris exists, we recommend its use in Phase 1.

After the field work is done, we will return to our office to evaluate the results and then contact you regarding the next phase of study. This next phase might require borings be drilled, additional test pits, different geophysical surveys, or some other method, tbd. Or the next phase might not require more field work but simply more rigorous analysis and complex recommendations for repair that we did not

Chestnut Bend HOA, Nashville, TN
January 17, 2018

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initially budget for. Of course, it is possible that the Phase-1 field study will provide all of the necessary information wherein we can simply complete our report with our recommendations for stabilization/repair.

As you can tell, our precise scope of services is difficult to determine. So, too, will be our cost. For **Phase 1**, we recommend a budget estimate of \$17,500 for Phase 1. This budget estimate consists of the following items:

1. Excavator Services: cost+15%, roughly estimated to be **\$4500** (2 -2.5 day effort).
2. Landscape Restoration: cost+15% plus some time for Geotek's geologist with the landscapers. Cost roughly estimated to be **\$3000**.
3. Underground Utility Locate: Free public service (811) might not locate areas of investigation. GPR survey will be attempted. If this is insufficient, a private utility locator might be needed at cost +15%.
4. Geotek Phase-1 Cost A: **\$6000**. This excludes our cost of data compilation, analysis, evaluation, and report, in the event that a Phase-2 study is necessary.
5. Geotek Phase-1 Cost B: **\$4000**. This cost represents the items excluded in Cost A. It represents the overall engineering effort necessary to submit a report with recommendations assuming that either (a) Phase 1 is the only necessary phase, (b) Phase 1 is all you want us to do, or (c) the Phase-1 recommendations are fairly routine and straight-forward.

This type of forensic exploratory subsurface work cannot be accurately priced. We intend to invoice our services on a unit price basis per the attached fee schedule. Please also bear in mind that we will not be providing "remedial design" services. We are providing consultation, our opinions, and our conceptual recommendations. Whether you need a formal design is something that the City can consider and decide.

For approval and authorization to proceed, please simply reply by email. Meanwhile, should you have any questions or need additional information, feel free to contact us.

Sincerely,

GEOTEK ENGINEERING COMPANY, INC.



John Rami Mishu, P.E., P.G.

Attch: (1) Fee Schedule
(2) Terms for Services

JRM/cm/prop/Chestnut Bend HOA

GEOTEK

Geotek Engineering Company, Inc. • 2909 Elizabeth Street • Nashville, Tennessee 37211-2302
(615) 833-3800 • Fax (615) 833-4097 • www.geotektn.com

2018 Fee Schedule**PERSONNEL STANDARD HOURLY RATES**

Principal Engineer or Manager	\$ 275.00/hr
Project Engineer, Manager, or Geologist (Level II)	180.00/hr
Project Engineer, Manager, or Geologist (Level I)	145.00/hr
Staff Engineer or Geologist (Level II)	125.00/hr
Staff Engineer or Geologist (Level I)	105.00/hr
Senior-Level Field Technician (for other testing/monitoring)	85.00/hr
Field Technician (for routine soil and concrete testing)	70.00/hr
Special Inspector IBC Ch. 17 (e.g., Structural Steel, Masonry, etc.)	95.00/hr
Support Staff (drafting, secretarial)	70.00/hr
Travel Per Diem	200.00/day(±)
Mileage (to/from site)	0.65/mi
Vehicle Daily Rate (on-site)	25.00/day

FIELD INVESTIGATION

Mobilization of Heavy Equipment (e.g., truck-mounted drill rig, water truck, dozer, etc.)	\$ 500.00/ea
Mobilization of Specialized Heavy Equipment (e.g., ATV-mounted drill rig)	850.00/ea
Mobilization of Light Equipment (e.g., steam cleaner, portable core drill, etc.)	200.00/ea
Dozer	cost + 15%
Backhoe	cost + 15%
Water truck	300.00/day
Steam cleaner	150.00/day
Portable core-drill	cost + 15%
Rentals	cost + 15%
Borehole set-up	50.00/ea
Auger sounding/drilling	10.00/ft
Standard Penetration Testing (SPT) and sampling at 2.5-ft intervals for first 10 feet	
and 5-ft intervals thereafter - 0 to 50 ft depth	15.00/ft
- 50 to 100 ft depth	22.00/ft
Continuous SPT and sampling - 0 to 50 ft depth	30.00/ft
- 50 to 100 ft depth	45.00/ft
Shelby tube sampling	60.00/ea
Coring set-up	150.00/ea
NX rock coring	55.00/ft
Drilling in rock (3- to 6-inch roller bit)	45.00/ft
Drill rig and crew requiring use of rig for special purposes (e.g., difficult drilling conditions, field permeability testing, instrumentation, etc.)	300.00/hr
Furnish and install (in pre-drilled hole) - 2-inch, Sch 40 PVC casing with 10-ft well screen and backfill with sand, bentonite seal, and grout	30.00/ft
Furnish and install 6-inch protective steel surface casing with locking cap	400.00/ea
Standby and miscellaneous time for drill crew (e.g., wait on client, decontamination, gate entry/exit delays, geophysical logging, prepare access roads, survey boring locations, etc.)	300.00/hr

- NOTES:**
1. All mobilization rates listed above are minimum charges. Actual charge may vary with location and job requirements.
 2. Minimum project charge for truck-mounted drill rig and crew is \$2,000 and for ATV-mounted drill rig and crew is \$2,200.
 3. Various other well installation requirements such as inclinometer casing, Sch 80 PVC casing, stainless steel casing, protective guard posts, etc. are available upon request.
 4. Other drilling/sampling services (e.g., barge-mounted drilling, 11-inch augering, angle drilling, piston sampling, HX coring, air-rotary drilling, grouting, etc.) are available upon request.
 5. Other field testing services such as field CBR, plate load, pile load, field permeability, non-destructive steel, pH, resistivity, etc. are available upon request.
 6. Rates are subject to annual escalation.

Geotek Engineering Company, Inc.
2018 Fee Schedule

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LABORATORY TESTING

Soil, Aggregate, and Rock-Core

Nuclear density	\$ 50.00/day
Static or dynamic cone penetrometer	25.00/day
Natural water content	10.00/ea
Atterberg limits (liquid and plastic)	65.00/ea
Unit weight of soil or rock	15.00/ea
Specific gravity of solids	50.00/ea
Grain-size analysis - complete	120.00/ea
- washed	80.00/ea
- material passing No. 200 sieve	50.00/ea
Unconfined compression test of soil	65.00/ea
Index-penetrometer Test	10.00/ea
Proctor - Standard or Modified	150.00/ea
- Method C	200.00/ea
Swell test w/restraint	175.00/ea
Hydraulic conductivity w/ triaxial permeameter - undisturbed	250.00/ea
Consolidation - w/ rebound	300.00/ea
- w/ rate of consolidation measurements	450.00/ea
Triaxial compression - unconsolidated-undrained (3 points)	900.00/ea
- consolidated-undrained (3 points)	1,200.00/ea
- consolidated-drained (3 points)	1,500.00/ea
Remold samples for specialized tests (e.g., hydraulic conductivity, triaxial, and consolidation)	50.00/ea
California Bearing Ratio - 3 points	400.00/ea
- 1 point	200.00/ea
- undisturbed sample	150.00/ea
Los Angeles abrasion of aggregate	350.00/ea
Sodium Sulfate soundness test for aggregate (5 cycles)	450.00/ea
Relative density of cohesionless soil	125.00/ea
Sand equivalence test	100.00/ea
Flat, elongated, fractured faces of aggregate	100.00/ea
Organic content (lost in ignition)	50.00/ea
pH of soil (lab method)	25.00/ea
Resistivity of soil (lab method)	60.00/ea
Point Load Index Test of Rock (Axial)	85.00/ea
Splitting Tensile Test of Rock Core (Brazilian)	80.00/ea
Compressive Strength of Rock Core	60.00/ea

Concrete

Concrete Mix Design - standard	\$ 2,500.00/ea
- 1-pt. verification	1,800.00/ea
- verification without testing	1,000.00/ea
Flexural strength and/or curing	60.00/ea
Compressive Strength of Concrete Cylinder	15.00/ea
Petrographic Analysis	cost + 15%
Concrete Coring	cost + 15%

Asphalt

Asphalt Mix Design - Marshall method	\$ 2,500.00/ea
- per TDOT requirements	4,000.00/ea
- 1-pt. verification	1,800.00/ea
- verification without testing	1,000.00/ea
Extraction/gradation	200.00/ea
Unit weight of in-place asphalt cores	50.00/ea
Marshall compaction and density (1 set of 3 specimens)	250.00/ea
Marshall stability and flow (1 set of 3 specimens)	250.00/ea
Nuclear density meter rental	50.00/day
Theoretical Specific Gravity (Rice method)	75.00/ea
Asphalt Coring	cost + 15%

Geotek Engineering Company, Inc.
2018 Fee Schedule

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LABORATORY TESTING (continued)

Masonry

Compressive Strength of Mortar or Masonry Grout	\$....40.00/ea
Unit Weight and Absorption of Concrete Masonry Units.....	70.00/ea
Compressive Strength of Concrete Masonry Units	70.00/ea5
Compressive Strength of Concrete Masonry Unit Prisms	120.00/ea

Steel

Visual Weld, Bolt Torque, Shear Stud Monitoring.....	Hourly Rate
Steel Reinforcement and Post-Tensioning Steel Monitoring.....	Hourly Rate
Fireproofing Testing/Monitoring	Hourly Rate
Non-Destructive Steel Testing Services.....	Upon Request

- NOTES:**
1. 24-hour notice required for field testing services.
 2. Field testing services charged portal to portal.
 3. Normal work day is any 8-hr period between 7:00 a.m. to 6:00 p.m. Overtime multiplier of 1.5 for technicians will be applicable for services rendered outside of these hours, over 8 hours/day within this period, and on Saturdays, Sundays, and Holidays.
 4. Minimum site visit charge for technician is 4 hours (exception if only for pick-up/delivery of samples, cylinders, letters, etc.)
 5. Technicians, geologists, and engineers for field testing, monitoring, and evaluation (e.g., load tests, test-pit sampling, In-Place-Density testing, preparation of cylinders, core sampling, etc.) are charged at standard hourly rates noted herein.
 6. "Engineer/Manager" and "Support Staff" time spent to produce, review, and submit field reports will, on occasion, be charged.
 7. Special and/or additional laboratory-test procedures or effort might require different cost-basis.
 8. Rates are subject to annual escalation.