

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2017-0374**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and COLLIER ENGINEERING CO, 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:

**CITY OF FRANKLIN FIRE STATION 7 GEOTECHNICAL SERVICES
FRANKLIN TENNESSEE 37064**

1. **SCOPE OF SERVICES.** Consultant shall provide up to 15 site borings to evaluate pertinent geotechnical conditions at the area proposed for construction and to develop associated geotechnical parameters for earthwork and design and construction of foundations, slabs and pavements and roadway 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 Nine Thousand Nine Hundred Seventy-Five and 00/100 Dollars (\$9,975.00).

The City Administrator Approved this Agreement on the 10TH day of JANUARY 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:

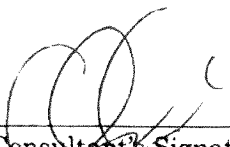
- 11.1 **APPLICABLE LAW/CHOICE OF FORUM AND VENUE.** This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson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

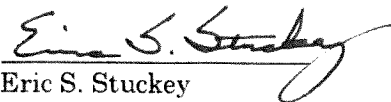
ARTICLE 12. DISPUTE RESOLUTION, BREACH.

- 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.

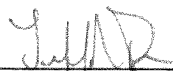
ARTICLE 13. SURVIVAL.

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
TITLE: President
Date: 08Jan2017

BY: 
Eric S. Stuckey
City Administrator
Date: 1-10-18

Approved as to Form:


Tiffani M. Pope, Staff Attorney

COF CONTRACT No. 2017-0374



December 22, 2017

City of Franklin (the City)
109 3rd Avenue South
Franklin, TN 37064

Attn: Mr. Brad Wilson
Project & Facilities Director

Re: Proposal for Geotechnical Engineering Services
Proposed Fire Hall No. 7
Franklin, TN

Dear Mr. Wilson:

Pursuant to our discussions with Mr. Eric Gardner of CEC, Inc. (CEC), Collier Engineering Company, Inc. (Collier) is pleased to submit this proposal for exploration and consulting services for the above-referenced project. The purpose of our services will be to evaluate the pertinent geotechnical conditions at the area proposed for construction and to develop associated geotechnical parameters for earthwork and design and construction of foundations, slabs, and pavements. This correspondence outlines our understanding of the project, and provides a fee estimate for our services.

1.0 Project Information

Project information provided to us by CEC includes the preliminary design drawing package for the project dated December 11, 2017. Brief descriptions of the proposed improvements, assumed design parameters, and existing conditions are noted below.

- ✓ Proposed improvements: ~16k SF fire hall with tall ceiling equipment bays, attached staff quarters, loop driveway, staff parking, approach (front) apron, onsite detention, fire station access road
- ✓ Assumed structural loads: columns – 125 kips; walls – 4 klf; slabs – 150 psf
- ✓ Grading: Will entail up to about 7 feet of fill and 13 feet of cut for the building; roughly 5 feet of fill and up about 25 feet of cut for paved areas and access road; grading plan shows fill slopes inclined at 4H:1V and cut areas laid back at 3H:1V

The site is gently to moderately sloping ground covered with weeds and grass and few trees. Nearly 60 feet of topographic relief is present across the area of proposed, ranging from about El. 770 along the planned access road intersection with Peytonsville Road up to approximately El. 828 on the adjacent sloping hillside. An overhead powerline traverses the west side of the site. We performed a brief windshield drive-by reconnaissance at the site, and noted that most former trees depicted on relatively recent aerial database images have been removed.

Should any of the stipulated assumptions or stated project information be inconsistent with the planned improvements, please let us know so that we may make necessary modifications to this proposal.

Proposal for Geotechnical Engineering Services
Proposed Franklin Fire Hall No. 7
December 22, 2017



Review of available geological information indicates the host geology on the noted hill is capped by Mississippian Age, Fort Payne Limestone. The base of this unit is mapped at El. 980 and the hill tops out at roughly El. 990. Underlying the Ft. Payne unit to about El. 880 is argillaceous thin to medium bedded limestone of the Leipers Catheys Formation. Below the Leipers Catheys bedrock between approximately El. 880 and El. 780 is phosphatic limestone of the Bigby Cannon Formation. The geological map suggests a sliver of land at the Peytonsville Road curve, where the proposed fire station access road will connect, is underlain by a narrow band of sandy, phosphatic bedrock of the Hermitage Formation. The USDS website Web Soil Survey describes the local soils as having a gravelly constituent. However, gravelly soils are not typically generated from in-place weathering from the Leipers Catheys and Bigby Cannon. In this setting, and in particular where Ft. Payne caps the local hillsides or ridgetops, our experience suggests that portions of slopes below hilltops and along ridge flanks have a high potential to consist of colluvium, which typically contains a gravelly constituent. This material is a soil deposit that was generated by downhill movement due to slope wash and erosion, but more so due to gravity and mass wasting. In essence, colluvium is a relic landslide. Colluvial soils would pose a greater potential for future movement or slides if the deposit is of considerable thickness and when the angle of the host slope is changed by grading, and the internal strength is changed (lowered) by inundation or loading. The presence and thickness of colluvium, if present in or near the area proposed for construction, would be confirmed by subsurface exploration and visual examination by experienced personnel. The mapped geology and soil makeup of the area of proposed construction is mentioned in this context to introduce the prospect and potential for slipping and erodible soils to exist on the host hillside. These aspects were discussed in detail with Mr. Gardner.

Based on our experience, we expect that the deeper excavations for the project would fully penetrate existing overburden and engage underlying bedrock. This aspect of the grading may create the possibility of forming a near vertical presplit rock face in the long cut required to build the planned fire station access road. Creating such a cut would reduce the amount of excavation required as the general 3:H1V cut as planned could be modified accordingly. Further, this could produce dissimilar subgrades across the fire hall building pad (e.g., weathered bedrock on the cut side and transitioning to soil and fill on the opposite end). This situation would create a significant potential for excessive differential settlement as footings bearing in rock would experience essentially no settlement while soil or fill supported footings would undergo measurable settlement. The sitework and engineering recommendations for the building would be emphasized to help address and reduce this potential, pending the results of the proposed subsurface exploration.

2.0 Scope of Services

Fifteen borings are proposed for the project as discussed in the following brief summary. Additional details are provided on accompanying Attachment A and Exhibit 1. All borings will be advanced to refusal (the presumed weathered bedrock surface). The current proposed drilling program includes:

- Six borings for the building including at/near existing corners and middle of each long side; one boring at the building corner coinciding with the deepest planned cut will be extended into bedrock by coring;
- Four borings will be drilled in the loop drive and apron areas near the building; rock coring will be performed at the apron boring;
- Four borings will be drilled along the planned access road; core bedrock at three of these borings; and,
- A single boring for the proposed detention basin.



Proposal for Geotechnical Engineering Services
Proposed Franklin Fire Hall No. 7
December 22, 2017



Boring locations that conflict with the powerline easement and the related safe working distances will be offset as required. Rock coring operations will require water for lubricant and cooling fluid, and it will be hauled to coring locations via a support vehicle (a ¾ ton pickup). Thickness of the natural soil mantle is estimated to be no more than 10 feet thick.

To complement and kick off the drilling program, a senior geotechnical engineer will visit the study area to establish the boring locations. This engineer will also perform a site reconnaissance to visually review and document general surface conditions in the areas of interest. This review is intended to supplement the subsurface data and to document significant, discernible or visible aspects or anomalies such as existing fill, dropouts/sinkhole throats, springs, rock outcrops, poorly drained areas, etc.

The existing terrain is sloping ground and for the most part, we believe that an ATV chassis-mounted drill rig can traverse the study area and safely set/establish the drill rig at most selected points of exploration without significant difficulty. However, short stretches of more steeply inclined ground might coincide with desired drilling locations. In such instance, the borehole might be offset for reasonable distance assuming the geometry of nearby ground is amenable to this approach. Alternatively, where an offset borehole location is not feasible, we may consider abandoning the original location but would utilize the stipulated drilling footage to a relocated boring location on the project. Otherwise, if subsurface information at particular locations is critical to making informed decisions but the drill rig cannot be safely oriented and stabilized on the existing ground, it will be necessary to perform minor grading to create access and a near-level pad to accommodate the drill rig and the support truck. Our scope and budget does not include this service and would request the owner utilize City staff and resources to assist with such support to accomplish the drilling, as warranted. If we are to broker this service, the costs would be in addition to the stipulated base fee, as discussed hereinafter in Section 4.

Laboratory – In the laboratory, water content and where appropriate, hand penetrometer tests will be performed on representative split-spoon samples. We also plan to perform Atterberg Limits tests to confirm the soil classification and determine physical index properties. Soil samples will be visually classified in accordance with the Unified Soil Classification System (USCS). Several rock cores, and selected undisturbed soil specimens, if obtained, will be tested to evaluate unconfined compressive strength. Rock core specimens will be logged for lithology, depth of weathering, and physical weaknesses. Calculable recovery and Rock Quality Designation (RQD) values will be determined for each core run.

Engineering Report – The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of Tennessee. After completion of the field and laboratory testing programs, the data and conditions will be analyzed and a report will be prepared for the project by a registered professional engineer. The report will include:

- Notations regarding subsurface conditions
- Sketches depicting approximate boring locations
- Typed boring logs with soil and rock stratification based on visual soil classification, core examinations and calculations, and laboratory data
- Remarks regarding field exploration and laboratory testing procedures



Proposal for Geotechnical Engineering Services
 Proposed Franklin Fire Hall No. 7
 December 22, 2017



- ✓ Subgrade preparation/earthwork recommendations including notations regarding methods to remove and excavate rock, potential to form pre-split (vertical) rock cuts, and issues regarding use of rock materials for engineered fill for this project
- ✓ Design values for allowable bearing capacity for shallow foundations
- ✓ Estimated settlement of foundations
- ✓ Seismic site classification based on 2012 IBC protocol

3.0 Schedule

We would begin coordination of the fieldwork immediately upon establishment of a fully executed contract and notice to proceed. Utility locators are allotted 72 hours excluding weekends and holidays to perform their services for individual one call tickets. We expect to begin drilling within about one week after receipt of signed contract. The drilling scope is anticipated to take about two to three days, pending amenable site mobility and agreeable weather. The field schedule might be impacted if support services for minor grading are required and are to be coordinated. We expect the laboratory work could be finished about a week after the field work is completed. We should be prepared to present our preliminary conclusions within about 3 to 4 weeks after receipt of notice to proceed, assuming no undue delays for weather or coordination of services.

4.0 Compensation

Based on the above proposed program, we quote a lump sum fee of \$9,975.00 for the study. A breakdown of the fee is presented below. Should subsurface conditions be encountered which require major revisions in the subsurface exploration program and/or result in higher costs, we would contact you prior to initiating this work. Additional services outside of the scope of work described in this proposal will be conducted on a time and materials basis per the accompanying Fee Schedule. For projects involving services over an extended period of time, interim invoices will be submitted.

✓ Drilling.....	\$5,850.00	Site visit, boring layout, multiple rig mobilizations, and stipulate drilling
✓ PE site visit	\$775.00	Includes office preparation
✓ Laboratory	\$850.00	Classification, index and strength testing of soil and rock
✓ Engineering.....	\$2,500.00	Project management, analysis, and report

We reiterate that the above budget does not include any support services that might be necessary to accomplish the drilling on the sloping ground. Due to the relatively short notice for this proposal request, we were not able to coordinate a site visit with our preferred drill sub for their comments and input on these matters. Based on our experience, we expect most boring locations are accessible but assistance may be required at spot locations.

The fee is valid for 60 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures. The fee quote is based on the assumptions and conditions provided at the time of this proposal.



Proposal for Geotechnical Engineering Services
Proposed Franklin Fire Hall No. 7
December 22, 2017



5.0 Authorization

If this proposal meets with your approval, we would request the City issue a project specific agreement (the Contract) to engage our services. This proposal, the Contract, and the Fee Schedule together constitute our proposal and contract with the City.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give us a call.

Sincerely,
Collier Engineering Company, Inc.

A handwritten signature in black ink, appearing to read 'J. Samuel Vance', is written over a horizontal line.

J. Samuel Vance, P.E.
Geotechnical Manager

Attachments: Attachment A - Geotechnical Engineering Services
Fee Schedule



Proposal for Geotechnical Engineering Services
Proposed Franklin Fire Hall No. 7
December 22, 2017



Attachment A – Geotechnical Engineering Services

Site Access – We assume that the City will provide right of access to the areas to be explored. Our fee is based on the sites being accessible to the stipulated drill rig without mobility assistance. Our current fee and scope does not include services associated with wet ground conditions, leveling/minor grading to create near-level pads at drilling locations, tree or shrub clearing, or damage of existing landscape. If such conditions are known to exist on the site or we must broker any support service, Collier should be notified so that we may adjust our scope of services and fee, if necessary.

Utility Locate – Client should provide any available information concerning the location of subsurface utilities in the area. We will initiate the utility clearance process by calling the state's underground utility locate system. If there are any entities that own or maintain utilities at the properties and that are not utility locate subscribers, contacting those firms/persons and locating of the associated utilities will be the client's responsibility. Client agrees to make arrangements with a private utility company or provide Collier with detailed as built information, regarding the location of any other public and private utilities. Collier will be responsible to the extent they drill in an area where a utility has been properly located and marked. Collier is not responsible to the extent any loss, damage, or injury is caused by the failure to locate a utility properly, or inaccurate and/or incomplete information provided by others.

Boring Locations – Our fee is based on Collier providing layout of the borings; additional costs may result if this is not the case. Layout of points of exploration will be approximate. Distances from available features are generally established using a measuring wheel or pacing, and right angles are estimated. Alternatively, we will obtain and use geodetic information and other pertinent site features using a hand held GPS or smart phone app, provided CEC is able to assist with assimilating the information for our use. Approximate elevations will be interpolated from available drawings. If a specific elevation reference is desired, we recommend having the project surveyor locate our borings after completion.

Sampling – Overburden sampling would be in accordance with our standard procedures wherein split spoon samples are obtained in granular and cohesive soils augmented by thin-walled tube samples taken within soft cohesive soil, if present. Disturbed samples may also be obtained from the flight of the augers. Four samples are typically obtained in the top 10 feet, and one sample is generally obtained every 5 feet for the remaining depth of the boring. During drilling operations and immediately after, groundwater levels will be measured and recorded. After groundwater levels are recorded, the boreholes will be backfilled to the ground surface with auger cuttings unless otherwise stated. Once the samples have been collected and classified in the field, they will be placed in appropriate sample containers for transport to our laboratory.

Site Restoration – Collier and our preferred subcontract driller will take reasonable efforts to reduce damage to the property, such as rutting of lawn areas, etc. However, it should also be understood that in the normal course of our work some such damage could occur. For safety purposes, each boring will be backfilled immediately after their completion. Excess auger cuttings would be left on top of the filled boreholes or scattered nearby. Because backfill material often settles below the surface after a period of time, we recommend the boreholes be checked periodically and backfilled if necessary. We could provide this service at your request or grout the borings, but this would involve additional cost. We have not budgeted to restore the site beyond the actions stated above.

Schedule – The proposed fieldwork is planned during normal weekday business hours. A premium charge will apply if the field work must be performed during evening hours or on weekends or holidays.



Collier Engineering Co. Inc.
Professional Services Fee Schedule
December 1, 2017

Principal	\$250.00
Senior Project Manager	\$165.00
Senior Project Engineer	\$150.00
Project Manager	\$135.00
Project Engineer	\$125.00
GIS/IT Manager	\$120.00
Design Engineer	\$115.00
Construction Manager	\$95.00
Engineer in Training	\$85.00
IT/GIS Analyst	\$85.00
Survey Manager	\$85.00
CAD Technician	\$72.50
Senior Inspector	\$75.00
Surveyor	\$73.00
Administrative Specialist	\$69.00
Inspector	\$65.00
Finals Records Clerk	\$72.50
Administrative Assistant	\$56.00
Engineering Tech I	\$56.00
Seasonal Intern	\$35.00
Expenses, subcontracted services	Cost plus 15%
Mileage	\$0.65/mi

