



# MEMORANDUM

May 9, 2013

TO: Board of Mayor and Aldermen (BOMA)

FROM: Eric Stuckey, City Administrator *Eric*  
David Parker, P.E, City Engineer/CIP Executive  
Paul Holzen, P.E., Director of Engineering  
Dan Allen, P.E., Director of Engineering  
Jonathan Marston, P.E., Staff Engineer

SUBJECT: Consideration of Contract 2013-0021, the Professional Services Agreement (PSA) with CDM Smith, Inc. for Construction Engineering and Inspection (CEI) services for the South Carothers Parkway Extension Project in an amount not to exceed \$860,000.00.

### Purpose

The purpose of this memorandum is to provide the Board of Mayor and Aldermen (BOMA) with information to consider a professional services agreement (PSA) with CDM Smith for construction engineering and inspection (CEI) services for the South Carothers Parkway Extension Project.

### Background

On May 8, 2012 BOMA approved Sullivan Engineering, Inc. (SEI) to modify the design of the South Carothers Parkway project. This design modification allows the construction of South Carothers Parkway as a 2-lane facility, with support for a future 4-lane build-out. The construction of this project is estimated at 25 months. The services provided by CDM Smith and their sub-consultants, SEI and AMEC, will supplement the project oversight provided by City Staff and ensure the final product is of the highest quality.

### Financial Impact

This PSA for a not to exceed amount of \$860,000 with CDM Smith will be paid via the Capital Projects Budget. The construction component of the project was budgeted and included in the Capital Investment Funding Plan at \$13.7 million.

### Recommendation

Staff recommends approval of this PSA with CDM Smith, Inc. in the amount not to exceed \$860,000.00.

**CITY OF FRANKLIN, TENNESSEE  
PROFESSIONAL SERVICES AGREEMENT  
COF Contract No 2013-0021**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **CDM SMITH, INC.** hereinafter referenced as Consultant, who mutually agrees 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:

**South Carothers Parkway Extension Project  
Construction Engineering and Inspection Services**

1. **SCOPE OF SERVICES.** Consultant shall provide Construction Administration, Engineering, Inspection Services and related technical services for the Project in accordance with the SCOPE OF SERVICES. The SCOPE OF SERVICES as found in **Exhibit A** shall be considered as an integral part hereof.
2. Consultant shall be paid on a time and materials basis for work performed based on the fee schedule for work performed as contained in **Exhibit A** in the Amount Not To Exceed **EIGHT HUNDRED SIXTY THOUSAND AND NO/100 DOLLARS (\$860,000.00)**. The FEE SCHEDULE shall be considered as an integral part hereof
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.

**The Board of Mayor and Aldermen Approved this Agreement on the  
\_\_\_\_\_ Day of \_\_\_\_\_ 2013.**

BY: \_\_\_\_\_  
Consultant's Signature  
TITLE: \_\_\_\_\_  
Date: \_\_\_\_\_

BY: \_\_\_\_\_  
Dr. Ken Moore  
Mayor  
Date: \_\_\_\_\_

## **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 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. However, nothing in this Article shall prevent Consultant from

engaging independent consultants, associates, and subcontractors to assist in the performance of the Services at Consultant's cost.

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 contract 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 **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.

6.3 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 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 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 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 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**  
The 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](http://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, the City and the Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. The City and Consultant will take affirmative action to ensure that 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 The Consultant shall insert the foregoing provision in all contracts relating to this Project.

10.2 **TITLE VI – CIVIL RIGHTS ACT OF 1964.** The City and the 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 The 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 the City and the Consultant.

10.4 **WARRANTIES/LIMITATION OF LIABILITY/WAIVER.** The City reserves all rights afforded to local governments under law for all general and implied warranties. The 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 the Contract. No arbitration or mediation shall be binding.

- 12.2 **BREACH.** Upon deliberate breach of the Contract by either party, the non-breaching party shall be entitled to terminate the Contract 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 Contract, agreement 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.



Six Corporate Centre  
830 Crescent Centre Drive, Suite 400  
Franklin, Tennessee 37067  
tel: +1 615 771-2466  
fax: +1 615 778-9733  
cdmsmith.com

**EXHIBIT A**  
COF Contract No. 2013-0021

May 3, 2013

Mr. Paul Holzen, PE  
Director of Engineering  
City of Franklin  
109 3<sup>rd</sup> Avenue South  
Franklin, TN 37064

**RE: Carothers Parkway South Extension  
Construction Engineering & Inspection Services (CEI) Proposal**

Dear Paul:

We appreciate the opportunity to provide you with this proposal to provide Construction Engineering & Inspection Services on this important project. As you are aware, we are very familiar with this corridor having provided CEI services on previous sections of Carothers Parkway and most recently having provided Structural Engineering (Bridge Design and Hydraulic Analysis) for the Carothers Parkway South Extension as a sub-consultant.

In preparing this proposal we have coordinated with our sub-consultants SEI and AMEC, have reviewed the Roadway/Bridge Plans and based on our construction experience we have developed the enclosed Project Schedule which sets forth a sequence of construction. Based on the Project Schedule we anticipate a 24 month construction period and 1 month for closeout which provides the basis for our enclosed Scope of Services and Man-hour/Fee Estimate. The services outlined herein will be performed on an hourly rate cost basis with a not-to-exceed upper limit fee budget of \$860,000.

Should you have questions or need additional information please contact me at 615.807.7808 or via email at polkrf@cdmsmith.com.

Sincerely,

CDM Smith Inc.

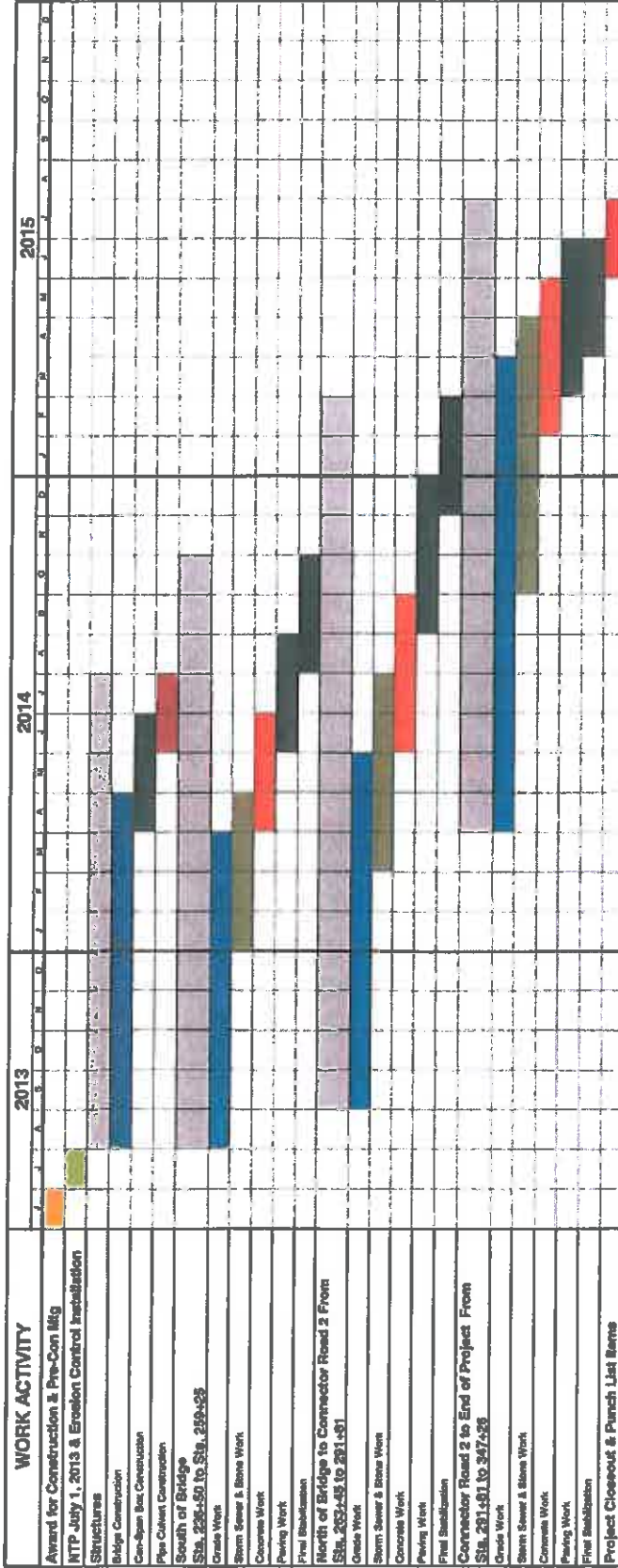
Robert F. Polk, P.E.  
Associate





# Project Schedule Carothers Parkway South Extension For The City of Franklin, TN

5/02/2013  
24 Months Construction and 1 Month Closeout





## **Carothers Parkway South Extension for the City of Franklin, TN Scope of Services for Construction Engineering and Inspection (CEI)**

- 1. Project Information**
  - 1.1. Coordinate activities with City of Franklin Project Supervisor
- 2. Preconstruction Conference**
  - 2.1. Erosion control review with contractor prior to preconstruction conference
  - 2.2. Preparation for preconstruction meeting
    - 2.2.1. Invitees
    - 2.2.2. Agenda
  - 2.3. Lead preconstruction meeting with contractor
    - 2.3.1. Resolve all issues that arise at preconstruction meeting with appropriate agencies
  - 2.4. Prepare and distribute minutes and documentation
- 3. Project Meetings**
  - 3.1. Preparation for monthly construction meeting
    - 3.1.1. Invitees
    - 3.1.2. Agenda
  - 3.2. Lead monthly construction meeting
  - 3.3. Prepare and distribute minutes and documentation
- 4. Project Administration**
  - 4.1. Provide effective and qualified supervision for all inspection services
  - 4.2. Oversee coordination of inspection services to adequately cover all aspects of the project
  - 4.3. Provide overall project administration
  - 4.4. Coordination with assigned City of Franklin Project Supervisor
  - 4.5. Monitor sub-consultant hours charged to the project (provide justification of overtime)
  - 4.6. Provide and update to City of Franklin Project Supervisor a listing of personnel assigned to project
    - 4.6.1. Provide and update emergency phone numbers of consultant personnel to City of Franklin Project Supervisor
    - 4.6.2. Provide and update emergency phone numbers of contractor personnel to City of Franklin Project Supervisor
  - 4.7. Prepare documentation with digital pictures of work progress
- 5. Field Surveys**
  - 5.1. Establish control points for contractor stake-out
  - 5.2. Independent verification of contractor layout surveys for roadway and bridge items
  - 5.3. Verify Contractor Layout for QA/QC Purposes
  - 5.4. Verify drilled shaft locations and elevations
  - 5.5. Verify bent cap elevations for all bridge bents
  - 5.6. Verify bridge seat abutment elevations for bridge beams
  - 5.7. Verify bridge beam profile before deck pour occurs
  - 5.8. Prepare As-Built Plans of Project, Include all utilities (horizontal and vertical), bridge, roadway, roadway appurtenances, and a full topographical survey of the roadway. As-Built must be in Tennessee state plane coordinates, NAD 83, NAVD 88, zone 4100/5301 for incorporation into the Franklin GIS database

This includes roadway, structures, geotechnical, traffic, and other design staff on an as needed basis.



## **Carothers Parkway South Extension for the City of Franklin, TN Scope of Services for Construction Engineering and Inspection (CEI)**

- 6. Supplemental Agreements/Construction Change, Force Account, Value Engineering Change Proposals**
  - 6.1. Notify City of Franklin Project Supervisors of need for SA's or Change Orders
  - 6.2. Negotiate additional pay item prices with contractor
  - 6.3. Prepare Change Order and submit to City of Franklin Project Supervisor
  - 6.4. Recommendations regarding time extension requests
  - 6.5. Submit VE Proposals from the contractor to City of Franklin Project Supervisor
  
- 7. Quality Assurance & Testing**
  - 7.1. Conduct all QA testing on the construction site normally performed by Inspection personnel with certified employees
  - 7.2. Document testing on standard forms
  - 7.3. Monitor documentation provided by the contractor
  - 7.4. Review of material certifications submitted by the contractor
  
- 8. Progress Payments**
  - 8.1. Document and assemble quantities for monthly progress payments
    - 8.1.1. Check field records for quantity references
    - 8.1.2. Check test reports for payment request quantities
  - 8.2. Submit pay quantities to City of Franklin Project Supervisor
  
- 9. Plans Revisions**
  - 9.1. Prepare roadway revisions south of Harpeth River to Truman Road
  
- 10. Geotechnical Engineering Services**
  - 10.1. Provide consultation regarding geotechnical problems, construction inspection issues, etc.
  - 10.2. Verify drilled shaft soundness and grant approval for proceeding with setting steel cage installation and the concrete pour
  - 10.3. Assist with undercut problem areas throughout the grading process as needed
  - 10.4. Attend project progress and other meetings as needed to assist with drill shaft and bridge construction items
  
- 11. Correspondence**
  - 11.1. Maintain office files of all project correspondence at CDM Smith Office in Franklin
  - 11.2. Submit correspondence to City of Franklin Project Supervisor
  
- 12. Inspection of Work**
  - 12.1. Provide effective and qualified inspection on all roadway and bridge construction activities
  - 12.2. Bridge inspection items and documentation will be performed pursuant to the Tennessee Department of Transportation (TDOT) Road and Bridge Specifications and Standard Operating Procedures





## **Carothers Parkway South Extension for the City of Franklin, TN Scope of Services for Construction Engineering and Inspection (CEI)**

- 12.3. Conduct foundation inspections and sounding, structural steel inspections for proper bar size, length, spacing, and splice, false work inspections, verify elevations and skews
- 12.4. Make technical measurements and capture quantities of all bridge related items and maintain project files and records
- 12.5. Record sketches of each bridge component including substructure and superstructure
- 12.6. Correspond with CDM Smith structures design staff and notify structure engineer of any discrepancies
- 12.7. Inspection for conformance to Project Plans and Specifications for roadway and bridge items
- 12.8. Record project inspection records on standard forms
  - 12.8.1. Provide daily inspection of erosion control measures. Additional inspections of erosion control measures as needed
- 12.9. Daily inspection of traffic control measures along existing streets
  - 12.9.1. Additional inspections of traffic control measures as needed
  - 12.9.2. Document weekly project traffic control on forms
- 12.10. Prepare daily diary of construction activities

### **13. Erosion Prevention Sediment Control (EPSC) Inspection**

- 13.1. Participate in project meetings relative to EPSC and be available to the City of Franklin Project Supervisor
- 13.2. Review EPSC Plans prepared by others
- 13.3. Review Storm Water Pollution Protection Plan (SWPPP) prepared by others
- 13.4. Document conditions – prepare photo journal of deficient areas and corrective actions
- 13.5. Evaluate EPSC measures and make recommendations to City of Franklin and Construction Supervisor, submit revisions to EPSC Plan for review and approval
- 13.6. Perform inspections at least twice a week over entire project under construction
- 13.7. Perform additional inspections due to rainfall events greater than 0.25 inch
- 13.8. Prepare and submit reports to City of Franklin Project Supervisor required by NPDES Permit and SWPPP. Include deficiencies and corrective actions.
- 13.9. Check rain gauge after rain events and maintain detailed records of all rainfall events

### **14. Reports**

- 14.1. Prepare and submit various reports and documents associated with contract administration

### **15. Final Closeout of Records**

- 15.1. Conduct final walk-thru with Contractor and City of Franklin
- 15.2. Compile and submit project records after project completion in standard format
- 15.3. Prepare and submit a final pay estimate



## **Carothers Parkway South Extension for the City of Franklin, TN Scope of Services for Construction Engineering and Inspection (CEI)**

### **16. LOMR Documents**

16.1. Prepare Letter of Map Revision (LOMR) after construction is complete, CDM Smith will update the hydraulic models to reflect the as-built roadway configuration including structure crossings (bridges and culverts) as well as fill placed in or immediately adjacent to the floodplain, and prepare Letter of Map Revision (LOMR) applications for submission to FEMA through the Williamson County and City of Franklin Floodplain Managers. This task will involve obtaining and incorporating as-built plans and survey information (not included in estimate) into the HEC-RAS models, re-running the models to determine revised water surface elevations, revising the bridge hydraulics report and supporting documents based on these results, and preparing mapping displays (revised FIRMs) as necessary. Additionally, CDM Smith will prepare write-up for publication in a local newspaper to satisfy the public notification requirement, as well as individual property owner notification letters, as required by FEMA and assist with responses to comments received from FEMA on the LOMR application package.

#### **Deliverables**

Based on our understanding of the project requirements, we anticipate that the following Deliverables will be provided:

#### **LOMR Application Package**

- 3 hard copies of LOMR application package (including bridge hydraulics report)
- 1 PDF of LOMR package
- Digital model files and survey as-built information
- Digital mapping files (topographic work map, revised FIRM)
- Proof of public notification in a local newspaper
- Proof of individual property owner notifications for affected properties

#### **Assumptions**

- LOMR Application fee is not included in this estimate
- As-built surveys will be provided to WRD
- The existing FIS/FIRM is the same one used to perform the CLOMR analysis on (9/29/06)

## **Carothers Parkway South Extension for the City of Franklin, TN Scope of Services for Construction Engineering and Inspection (CEI)**

### **Assumptions**

1. Construction effort will take 25 months from start to finish based on contractor using multiple crews
2. The proposed drilled shaft work can be completed as per plan and that work is not delayed due to lack of permit approval or issues regarding regulatory agencies
3. Inspection of offsite fabrication of bridge beams will be handled by TDOT inspector certifying compliance to specifications or contractor will be required to provide certification by a structural engineer that all items meet the required specifications
4. It is anticipated that the majority of borrow material will come from multiple locations along the proposed route of the new roadway; however, it may be necessary for the contractor to haul borrow material by dump truck from offsite borrow pits
  
5. Access to the site will occur from Truman Road on the south end, Connector Road 2 in the middle of the proposed roadway and from Old Carothers Parkway on the north end
6. The ten thousand feet of 8 inch PVC reclaimed waterline is removed from the plans
7. The five foot concrete sidewalk is installed along the new roadway as per plan
8. CEI Services will be performed on an hourly rate cost basis with a not-to-exceed upper limit fee established based on a 25 month construction schedule with direct expenses i.e. mileage, printing, sub-consultants, etc. to be billed at direct costs
9. City of Franklin Project Supervisor will coordinate activities with media and will respond to property owner issues
10. Inspection of utilities will be the responsibility of the City of Franklin or the appropriate utility supplier
11. Assistance required related to claims or potential claims by the contractor are considered additional services and are not included in CEI scope or fee budget





**South Carothers Parkway LOMR**

<b>MAN-HOUR AND COST ESTIMATE</b>										
<b>S. Carothers Parkway LOMR</b>										
<b>TASKS</b>	<b>Project Dir.</b>	<b>Proj. Mgr.</b>	<b>Sr Engr</b>	<b>Design Engr</b>	<b>Tech</b>	<b>Admin. Asst.</b>	<b>Survey Party</b>	<b>Chief of Surv</b>	<b>Total Hours</b>	<b>Total Cost</b>
<b>1 Project Management</b>	1								1	\$228
Invoicing & Financial Management		4							4	\$680
External Client Meetings		8	2	2					12	\$1,900
<b>2 LOMR Modeling</b>	1								1	\$228
Cut Cross-Sections from As-Built Data			2	6					8	\$1,020
Create & Run As-Built Model			4	16					20	\$2,520
Compare PCM (CLOMR) vs. PCM (As-Built) Results			4	6					10	\$1,320
Creates, Run & Analyze Floodway Model			4	8					12	\$1,560
QA/QC Models			4	4					8	\$1,080
<b>3 Prepare LOMR Application Package</b>	1								1	\$228
Obtain Form Data and Prepare Application Forms									0	
Overview & Concurrence			0.5			1			1.5	\$144
Riverine Hydrology & Hydraulics			0.5			2			2.5	\$213
Riverine Structures			1			2			3	\$288
Revise DHS-FEMA FIRM (Mapping)		0	4	12	8				24	\$2,800
LOMR Report Document									0	
Project narrative			2			2			4	\$438
Hydraulic Computations				6		2			8	\$858
Revised FIS Data Table			1	2					3	\$360
PCM (CLOMR) vs. PCM (As-Built) Comparison Table				2					2	\$240
Create Digital Files for Submittal					2				2	\$190
QA/QC LOMR Application Package		4				2			6	\$670
<b>4 Application with FEMA</b>	1								1	\$228
Public Notification Write-up			1			2			3	\$288
DHS-FEMA Coordination			8	8					16	\$2,160
Individual Notification Letters			2			6			10	\$852
DHS-FEMA Application Revisions			8	8					16	\$2,160
<b>Subtotal Hours</b>	<b>4</b>	<b>16</b>	<b>48</b>	<b>80</b>	<b>12</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>179</b>	
<b>Subtotal Cost</b>	<b>\$912</b>	<b>\$2,720</b>	<b>\$7,200</b>	<b>\$9,600</b>	<b>\$1,140</b>	<b>\$1,311</b>	<b>\$0</b>	<b>\$0</b>		<b>\$22,883</b>
<b>Direct Expenses (Telephone, Printing, Travel, etc.)</b>										<b>\$500</b>
<b>Total</b>										<b>\$23,383</b>
LOMR application fee is not included but is anticipated to be approximately \$5,000. Public notification within local newspaper is required. Cost varies depending upon local newspaper.										
* Rates based on 2015 timing of services										



**SULLIVAN ENGINEERING, INC.**

317 Main Street, Suite 201  
Franklin, TN 37064  
(615)642-5822

May 1, 2013

CDMSmith  
C/o Bob Polk, PE  
Six Corporate Centre  
630 Crescent Centre Drive  
Suite 400  
Franklin, TN 37067

**RE:** Carothers Parkway South Extension  
Construction Observation and Contract Administration  
From south of Falcon Crest Development  
To Truman Road West at the Highlands of Ladd Park  
City of Franklin, Tennessee  
Williamson County  
City of Franklin Project # 2013-0048

Dear Bob,

Please find attached our scope of services to define duties and task associated with the Construction Engineering Inspection, Observation and Contract Administration as part of the team assembled for this project. Below is a general summary of services and associated fee schedule.

<b><u>Project Summary</u></b>	
<b>Construction Engineering Support Services</b>	
Engineering	\$60,988
Field Survey (1)	\$30,000
<b>Plan Revisions (2)</b>	<b>\$58,731</b>
<b>Total</b>	<b>\$149,719</b>

**NOTES:**

- (1) Includes an as-built of the roadway template, to verify final quantities and use in preparation of the LOMAR. Inclusive of any additional data to verify contractor layout.

Survey task also includes time for Hart-Freeland-Roberts, Inc. survey team to provide additional roadway and bridge verification on an as needed basis.

- (2) Revision to the section of roadway south of the Harpeth River to provide for a split median design as requested by the City of Franklin Engineering Department.

The intent of this document is to provide an understanding of responsibility and authority of personnel while administering the construction documents. The administration of this agreement will be conducted in full cooperation with CEI Team, and City Staff assigned to the project. The City Project Supervisor associated with the construction of this project shall have the final word in regard to challenges by the contractor or decisions made by the contract administrator regarding work. The ultimate goal by all parties involved is to administer the contract in a highly professional manner, conducive of a cooperative relationship between the Construction Observation Team, Prime Contractor, and City Staff, to complete the work on budget, on time and with minimum inconvenience to the public.

Construction observation services will insure work activities conform to Plans and Specifications for all roadway, structures, and specialty items being incorporated into the project. In addition to the aforementioned items our team will check traffic control features to insure compliance with the construction documents. If our team observes deficiencies or problems with work performed by the prime contractor or his sub-contractors we shall promptly notify the city project supervisor and prime contractor of the problem. The prime contractor shall also be directed to take necessary actions to correct the situation immediately. Payment for deficient items shall be withheld until satisfactory corrective actions have been achieved by the Prime contractor.

I hope this proposal meets with your approval. Please phone after you have had a chance to review this proposal or if there are any questions.

Sincerely,

**Sullivan Engineering, Inc.**

*Paul Collins*

Enclosures











May 1, 2013

CDM Smith

Attn: Mr. Robert F. Polk, PE  
Associate  
830 Crescent Centre Drive, Suite 400  
Franklin, Tennessee 37067

Re: **Revised Proposal for Supplemental Construction Engineering and Inspection (CEI) Services**  
**South Carothers Parkway**  
**Franklin, Tennessee**

Dear Bob:

AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to present this revised proposal to perform supplemental Construction Engineering and Inspection (CEI) services for the above mentioned project. We are familiar with the project having working as a sub-consultant by providing the geotechnical study for the proposed roadway alignment.

AMEC will provide supplemental construction inspection support services for the South Carothers Parkway project as a sub-consultant to CDM Smith. The CEI team consists of CDM Smith, Sullivan Engineering, and AMEC Environment & Infrastructure. It is our understanding that the anticipated construction duration of the project will be 24 months with 1 month for project close-out.

AMEC has produced a cost proposal along with a proposed scope of services for the CEI Services for the South Carothers Parkway project. Attachment 1 consists of a Scope of Services and Attachment 2 provides a Cost Estimate for the work.

Once you have had an opportunity to review the scope of services and cost proposal, we will be happy to discuss any questions that you may have. AMEC appreciates this opportunity to be a sub-consultant to CDM Smith for this very important project for the City of Franklin.

Yours truly,  
AMEC

Kyle M. Peters, P.E., CPESC  
Civil Engineer/CEI Project Manager

Attachments: CEI Scope of Services  
Cost Proposal  
AMEC Standard Terms and Conditions  
Laboratory Unit Rate Schedule

AMEC Environment & Infrastructure, Inc.  
3800 Ezell Road, Ste 100  
Nashville TN  
USA 37211  
Tel (615) 333-0630  
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[www.amec.com](http://www.amec.com)

Proposal for South Carothers Parkway  
CEI Services



## **City of Franklin – South Carothers Parkway**

### **Scope of Work for CEI – Sub-consultant**

#### **Construction Engineering and Inspection Support Services**

AMEC will provide construction inspection support services for the South Carothers Parkway project as a sub-consultant to CDM Smith. The CEI team consists of CDM Smith, Sullivan Engineering, and AMEC Environment & Infrastructure. It is our understanding that CDM Smith will provide the full-time Resident Project Representative (RPR) for the project and that in doing so, AMEC will provide construction inspection and testing support services as outlined herein. Based upon this information, AMEC has determined a total number of man-months that will be required to provide the inspection support services needed. The anticipated construction duration of the project will be 24 months with 1 month for project close-out. If the project is not completed within the 24 month timeframe, AMEC's scope and fee will be subject to re-negotiation.

#### **CEI Services – Tasks**

The following tasks outline AMEC's inspection support services:

- AMEC will provide inspection for the borrow material which includes monitoring the material being hauled in from the borrow sites. AMEC will also monitor all fill placement activities that the contractor is performing for the roadway embankment. AMEC is to be onsite at all times during the placement of soil fill, stone aggregate subgrade and base materials, as well as during asphalt paving activities. AMEC understands that inspection support services will not be provided on days when the contractor is not working or on days deemed too wet for construction operations. The man-month estimate provided takes into account at least 2 rain days a month during the summer season along with limited construction inspection activities during the winter months.
- AMEC will provide certified and trained personnel for field testing and inspection. AMEC will also provide certified trained personnel for inspection of drilled shaft construction for the bridge. AMEC will monitor the testing provided by the contractor in the field as defined in the Contract, Plan, or Specifications and document testing on standard forms normally used by TDOT. AMEC will monitor documentation of testing by the Contractor. Field testing consists of nuclear density testing of subgrade and earthwork, base stone, ACI field testing for concrete and structural concrete placement, asphalt, structural backfill, and pipe backfill as defined in the Standard Specifications and the TDOT sampling and testing procedure. AMEC will provide aggregate analysis and moisture

testing for the proposed roadbed and bridge approaches including the embankment and base stone materials as defined in the Standard Specifications and TDOT's sampling and testing schedule. AMEC will provide miscellaneous checking of application rates and dimensions and bearings of asphalt placement to review conformance to Plans and Specifications. In case of notification of defective concrete as defined in the Specifications, AMEC will submit the initial information to CDM Smith on TDOT standard forms and receive the final disposition of the material after review. Certifications of material submitted by the Contractor will be reviewed by AMEC and the consultant CEI team for conformity to the Specifications. A Final Materials and Tests Certification will be provided in the Final Records submittal.

- The AMEC inspector will have the appropriate TDOT certifications.
  - Asphalt Roadway Paving Inspector
  - Class I Concrete Technician
  - Soils and Aggregate Technician
  - Nuclear Gauge Training
- AMEC will conduct lab testing for the site borrow material, subgrade material used along the roadway. The testing of materials will include stone aggregate base, asphalt testing, and concrete cylinder testing to confirm compressive strength. AMEC has provided an allowance of \$20,000 for this task.
- AMEC will have 5 hours a month for engineering and project management functions throughout the contract effort.
- AMEC will have a qualified geotechnical engineer provide drilled shaft inspection of the bridge for approximately 120 hours over a 2 month period. These hours have been incorporated into the project manager hours and rates for the months of September and October of 2013 as shown in the attached cost breakdown. Schedule B has been updated to incorporate these inspection activities.
- AMEC will have 2 hours a month for administrative support. This effort will include invoicing time along with filing of inspection reports for the project files.
- The hours for each task have been broken down into man-months. Man-months are determined by dividing the total number of hours per month by 173.33. The vehicle man-months reflect the same amount of time as required for the inspection activities.





**SCHEDULE D - Approved Direct Project Costs**

Description	Estimated Total Units	Units	Cost per Unit	CEI Duration (months)	Explanation / Justification / Calculations	Monthly Cost	Total
Full Size Vehicles	264.6	Days	\$27.00	24.0	See Schedule B, sheet 1 of 2	\$520.40	\$7,090
Photo Copies (project items)	1500.0	Page	\$0.12	10.0	Print copies of project plans and diaries	\$18.00	\$180
Direct Project Mileage (for Project Manager)	900.0	Mile	\$0.56	24.0	Project Manager mileage from Nashville Office to project site based on 24 trips (one per month) at 40 miles per trip.	\$22.40	\$556
Lab Testing	1.0	Lab Tests	\$20,000.00	24.0	Allowance for Lab Testing Services (Proctions, Alstberg Units, Grastations, Concrete Cylinder Bricks, etc.)	\$533.33	\$20,000
<b>TOTAL DIRECT PROJECT COSTS</b>							<b>\$28,407</b>

**SCHEDULE E - Labor, Overhead & Fee Summary**

a. TOTAL DIRECT LABOR AT HOME OFFICE OVERHEAD RATE (from schedule C, sheet 1 of 2)	\$6,503
b. TOTAL DIRECT LABOR AT FIELD OFFICE OVERHEAD RATE (from Schedule C, sheet 1 of 2)	\$51,245
c. SUBTOTAL (a + b)	\$59,748
d. Approved Overhead Rate (a x 2.6 (MLM))	\$167,285
e. PAY FOR PREMIUM TIME (from Schedule C, sheet 1 of 2)	\$4,602
<b>TOTAL LABOR COSTS</b>	<b>\$178,897</b>

**COST PROPOSAL SUMMARY**

<b>TOTAL DIRECT PROJECT COSTS</b>	<b>\$28,407</b>
<b>TOTAL LABOR COSTS</b>	<b>\$178,897</b>
<b>TOTAL PROJECT COST</b>	<b>\$200,304</b>