

**CITY OF FRANKLIN, TENNESSEE  
PROFESSIONAL SERVICES AGREEMENT  
COF Contract No. 2019-0322**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **GRESHAM SMITH** 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:

**DESIGN AND POST-DESIGN SERVICES FOR THE  
SR-96 (MURFREESBORO ROAD) TRAFFIC SIGNAL IMPROVEMENTS**

1. SCOPE OF SERVICES. Consultant shall provide data collection, engineering, and related technical services for the Project in accordance with the Scope of Services ("Services") as found in Attachment A, which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed, based on the Fee Schedule as contained in Attachment A, in the Lump Sum Amount of **Two Hundred Sixty-Nine Thousand Two Hundred Eighteen and 60/100 Dollars (\$269,218.60)**.

The Board of Mayor and Aldermen Approved this Agreement on the \_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_.

## **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 claims, judgments, losses, damages, and expenses to the extent such claims, 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. The City shall retain an ownership and property interest therein whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: The City maintains all rights to data systems and data (including derivative or hidden data such as metadata) created and used by Consultant through information supplied to the consultant by the City.
- 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](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, 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 any 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.

**CITY OF FRANKLIN, TENNESSEE:**

By: \_\_\_\_\_  
**Dr. Ken Moore**  
Mayor  
Date: \_\_\_\_\_

**GRESHAM SMITH:**

By: \_\_\_\_\_  
Print: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Attest:**

\_\_\_\_\_  
**Eric S. Stuckey**  
City Administrator  
Date: \_\_\_\_\_

**Approved as to form:**

\_\_\_\_\_  
Maricruz R. Fincher, Staff Attorney

## Scope of Services

### **Project Background**

The goal of this project is to improve the traffic operations of 13 signalized intersections along SR 96 between Eddy Lane and Arno Road in Franklin, TN.

Design elements of this project may include enhanced vehicle detection, Flashing Yellow Arrows (FYAs), upgrade of existing signal controllers to Advanced Traffic Controllers (ATCs), Connected Vehicle (CV) infrastructure to support Signal Phase and Timing (SPaT) message broadcasting, and ADA and PROWAG pedestrian improvements.

The Gresham Smith team (Consultant) will provide the following professional design services associated with this project:

### **Project Tasks**

#### **Task 1 – Project Management**

This task includes the following:

- Prepare project schedule – The project schedule developed using Microsoft Project will include a work breakdown structure to document the relationship between tasks, critical milestones, and the planned duration of each activity. Updates to the schedule will be provided with each progress report.
- Kickoff meeting – Within 5 days of Notice to Proceed (NTP), the Consultant will hold a kick-off meeting with the City of Franklin to review the project scope, schedule, deliverables, communication protocol, and team organization. Meeting minutes will be provided within five (5) days of the meeting.
- Project status meetings – Project status meetings will be conducted at the City of Franklin's Traffic Operations Center (TOC) located at 109 3rd Ave. South, Ste. 133 Franklin, TN 37064, or alternatively by teleconference, to provide detailed updates on the project status.
  - Status meetings will occur at no more frequently than once per month. Consultant assumes that 36 project status meetings will be held over the project duration.
  - The Consultant will organize, schedule, and conduct all project meetings in coordination with the City Project Manager. The Consultant will prepare the agendas, furnish meeting materials, and prepare and distribute meeting minutes assuming one comment review cycle by the City.
  - In addition to these project status meetings, it is anticipated that periodic coordination meetings may be required between the Consultant and the City to discuss project activities and receive direction on project decisions. The Consultant assumes no more than six (6) "coordination meetings" over the course of a 36-month project duration.
- Stakeholder Coordination – Consultant will coordinate with stakeholder organizations anticipated to include the City, TDOT Local Programs, and organizations associated with the project.



- An initial meeting will be set up with the City and TDOT to determine the ADA needs for this project within 30 days of NTP.
- Prepare project progress reports and monthly invoices – Monthly invoices will be accompanied by monthly status reports that include a written description of the work completed over the reporting period, a description of anticipated work that will be performed in the upcoming reporting period, documentation of changes to the project schedule or scope, and note technical, management, or coordination issues.

*Task 1 Deliverables:*

- *Project schedule*
- *Meeting agendas, meeting materials and minutes for all scheduled meetings*
- *Monthly project progress reports and invoices*

**SEAR and NEPA Phase**

**Task 2 – System Engineering Analysis Report (SEAR)**

In conformance with Federal Rule 940 and TDOT Requirements, a SEAR document will be developed to address technology, operations, and maintenance of the proposed system and will include the following:

- Concept of Operations
- System Requirements
- Alternatives Analysis
- Technology Procurement Options and Recommendations
- Agreements and Integration
- System Verification Plan
- Operations and Maintenance Plan

The sub-consultant will provide as needed technical assistance for the SEAR creation.

*Task 2A – Concept of Operations*

A Concept of Operations (ConOps) will provide the framework for the SR 96 system. This document will include a high-level overview of the system, identify the stakeholders, the elements and capabilities of proposed technologies for the corridor, what the proposed technologies for the corridor will be used for, and how the proposed technologies will be operated and maintained.

The Consultant will conduct one (1) ConOps Workshop that will provide a forum for discussion with the City and project stakeholders and gather input. A sample agenda for this workshop will include:

- Overview
- Defining the goals and objectives
- Defining the operations needs
- Proposed system overview
- Operational/support environment
- Operational scenarios



Following the ConOps Workshop, a draft ConOps document will be submitted to the City for review and comment. The draft final ConOps document will be based on one comment review cycle of the draft document. The final ConOps document will be developed based on one comment review cycle of the draft final document and included as part of the final SEAR deliverable.

*Task 2A Deliverables:*

- *Workshop Stakeholder list, agenda, and workshop materials*
- *Draft ConOps, and Draft Final ConOps. The Final ConOps will be incorporated and delivered as part of the consolidated SEAR deliverable.*

*Task 2B – System Requirements*

The System Requirements documentation builds on the ConOps and identifies the functional requirements, applicable ITS standards from the ITS architectures, applicable statutes, regulations, and policies, and notes project constraints. The System Requirements document for this project will include a system verification plan, traceability matrix, and system acceptance plan.

A draft document will be submitted to the City for review and comment. The draft final System Requirements document will be based on one comment review cycle of the draft document. The final System Requirements document will be developed based on one comment review cycle of the draft final document and included as part of the final SEAR deliverable.

*Task 2B Deliverables:*

- *Draft System Requirements, Draft Final System Requirements. The Final System Requirements will be incorporated and delivered as part of the consolidated SEAR deliverable.*

*Task 2C – Alternatives Analysis*

The Alternatives Analysis will include an examination into alternative system configurations and technology options that meet the requirements for the system. A maximum of three (3) system options will be developed. The Alternatives Analysis will be a component of the overall SEAR and not a standalone deliverable.

*Task 2D – Funding /Procurement Options and Recommendations*

The Funding/Procurement Options and Recommendations will include an exploration into the available procurement options and provide the City with recommendations. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

*Task 2E – Agreements and Integration*

For this section of the SEAR, the Consultant will work with the City to identify needed agreements and integration activities for the system. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.



#### Task 2F – System Verification Plan

The System Verification Plan will be a component of the System Requirements document and will identify the applicable ITS standards and testing procedures for the system. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

#### Task 2G – Operations and Maintenance Plan

The Consultant will create an Operations and Maintenance Plan that identifies the procedures and resources necessary for operations, management, and maintenance of the system on SR 96. This will be a component of the SEAR and not a separately provided document. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

#### Task 2H – SEAR Deliverable

A consolidated draft SEAR will include items 2A through 2G as described above. The final SEAR will be developed based on one comment review cycle of the draft final document.

##### *Task 2 Deliverables:*

- *Draft Final, and Final SEAR document submitted to the City, TDOT Local Programs, and FHWA (via Local Programs)*

### **Task 3 – Prepare National Environmental Policy Act (NEPA) Documents**

The Consultant will prepare the NEPA documentation for the proposed project which is anticipated to be classified as a NEPA C-list Categorical Exclusion (CE). The C-list CE will require the preparation of a Purpose and Need Document, coordination with the TDOT Technical Sections, a review of historic structures, and preparation of the C-List CE template documenting that the project meets the criteria outlined in 23CFR771.117(c) and that the project will have no significant effects to the environment.

To support the data collection for the NEPA documentation and SEAR, a preliminary field review will be conducted to identify visible utilities, verify right-of-way, identify potential CV infrastructure locations, identify potential pedestrian improvements for ADA and PROWAG, identify candidate FYA locations, and identify detection needs. A preliminary layout plan for the proposed design will be developed and included within the NEPA documentation.

##### *Task 3 Deliverables:*

- *Preliminary layout plan*
- *Technical Studies; final NEPA document*

#### Task 3A – Preliminary Plans for Environmental Only

As a component of the NEPA documentation, the team will create the preliminary design of the system, which provide an opportunity for the City to provide feedback regarding the preliminary design via one comment review cycle.

Preliminary Plans will include:

- Cover sheet
- Layout sheets

*Task 3A Deliverables:*

- *Preliminary plans. One submittal.*

**Task 4 - Technology Demonstrations**

Using the SEAR ConOps and System Requirements as guidelines, the Consultant will coordinate connected vehicle and Automated Traffic Signal Performance Measures (ATSPM) technology demonstrations for the City. These 60 to 90 minute demonstrations will provide the City a time to learn about new technologies that are available and provide a forum to ask questions. The Consultant will work with the City to evaluate what technologies are most appropriate for the needs documented in the SEAR and will use this information as a basis for design and specifications for the project. It is assumed that product vendors will provide all materials to demonstrate their products/technology solutions.

*Task 4 Deliverables:*

- *Up to four (4) Technology Demonstration Meetings*
- *Technology Demonstration Meeting Notes. One draft submittal for all demonstrations, and a final submittal assuming one comment review cycle.*

**Design and ROW Phases**

**Task 5 – Design Plans**

The Consultant will prepare the Preliminary, ROW, and Construction plans using existing pdf and MicroStation drawings supplied by the City from past ITS, signal or intersection improvement projects as well as City GIS data. The intersection plan layout sheets will include existing features and detection and proposed technology. Detail sheets will include requirements for the new detection and signal control devices, including notes, manufacturer installation requirements and drawings. For this task, the sub-consultant will provide as needed technical assistance.

*Task 5A – Submittal of Preliminary Plans*

Once the Notice to Proceed (NTP) to Design has been issued, the team will submit the preliminary plans for review, which provide an opportunity for the City and TDOT to provide feedback regarding the initial design via one comment review cycle. After responding to review comments via a comment response form, the Consultant will request the NTP for the ROW phase. Comments on the preliminary plans will be incorporated in the ROW plans.

Plans will include:

- Cover sheet
- Layout sheets

*Task 5A Deliverables:*

- *Preliminary plans. One submittal.*
- *Local Programs Form 5-3 Preliminary Checklist*

### Task 5B – ROW Plans

After receiving the NTP for ROW phase, the Consultant will conduct a ROW phase field review that will be used in conjunction with Preliminary Plan phase comments to develop the ROW plans. The initial ROW Plans will be submitted to TDOT and the City for one comment review cycle. The Consultant will respond to initial ROW plan comments in a comment response form and incorporate changes into the Final ROW plans. The Final ROW plans will then be submitted to TDOT and the City with a request for the ROW Certification since no additional ROW is expected for this project.

ROW Plans will include:

- Cover sheet
- Quantity Sheets
- Index of Sheets, Standard Drawings and Abbreviations
- Scope of Work, General and Special Notes sheet(s)
- Layout sheets
- Plan sheets

#### *Task 5B Deliverables:*

- *Initial ROW Plans*
- *Preliminary plans comment response form*
- *Local Programs Form 5-3 Initial ROW Checklist*
- *Final ROW Plans*
- *Initial ROW Plans comment response form*
- *Local Programs Form 5-3 Final ROW Checklist*

### Task 5C – Construction Plans

After receiving the ROW Certificate, the Consultant will develop the Construction plans. The initial Construction Plans will be submitted to TDOT and the City for one comment review cycle. The Consultant will respond to initial Construction plan comments in a comment response form and incorporate changes into the Final Construction plans. Final Construction plans will then be submitted to TDOT along with the Final Construction Estimate, Bid Documents which include the Specifications (described further in Task 6), DBE Goals, and Bid Advertisement. Additionally, utility coordination documentation will be submitted.

The following components will be added to the ROW plans components as part of the construction plans:

- Detail sheets
  - Cabinet Equipment Table
  - Signal Controller Block Diagrams
  - Ramp and Pedestrian Signals Details, if needed
  - Detection Details
  - FYA Wiring Details
  - DSRC Details
- Traffic Control Plans Details – Advanced Work Zone Sign Layout

#### *Task 5C Deliverables:*

- *Initial Construction Plans*
- *Local Programs Form 5-3 Initial Construction Checklist*
- *Initial Construction Plans comment response form*



- *Final Construction Plans*
- *Local Programs Form 5-3 Final Construction Checklist*
- *Final Construction Estimate*
- *Bid Documents which include the Specifications*
- *Form 7-1 DBE Goals*
- *Bid Advertisement*

#### **Task 6 – Develop Engineering Estimate of Probably Cost**

The Consultant will prepare an engineering cost estimate for the design of the project. A draft version of the cost estimate will be submitted to the City for comment with the Preliminary, ROW, and Construction plans. The Final Construction Estimate will be prepared and submitted to the City and TDOT as noted in the previous task.

##### *Task 6 Deliverables:*

- *Preliminary Cost Estimate, Final ROW Cost Estimate, and Final Construction Plan Engineering Estimate of Probable Cost*

#### **Task 7 –Specifications and Bid Documents**

The Consultant will develop specifications for the signal controller, detection, dedicated short-range communications (DSRC) and ATSPM devices that will detail hardware and software requirements, define the Contractor's integration requirements, conditional and final acceptance testing requirements, and Contractor warranty and support requirements. Finally, the specifications will define Contractor required training and documentation. For this task, the sub-consultant will provide as needed technical assistance and develop the DSRC specification.

The draft Specifications will be submitted to TDOT and the City for one comment review cycle. Further, the Consultant will conduct an off-team peer review of the specifications. The Consultant will respond to draft specifications comments in the Final Specifications. The Consultant will also create the Bid Documents, which will include the specifications and Construction Advertisement.

##### *Task 7 Deliverables:*

- *Specification Documents (Draft and Final)*
- *Bid Documents (Form 8-1)*
- *Construction Advertisement (Form 8-2)*

#### **Task 8 – Utility Clearance**

The ROW plans will be distributed to the utilities as noted by the TDOT Utility office to determine if there are any anticipated conflicts. The goal of the process is to identify utility permits or make-ready work required. The Consultant will track correspondence and collect notification letters (i.e. no facilities, no conflict). Due to the nature of this project, it anticipated that limited or no utility relocations will be needed. The following are activities are anticipated with this task:

- Initial outreach to utilities within the County to determine if they are within the area
- Initial review of ROW plans to determine companies involved and extent of relocation to clear conflicts





- Official notification of utilities and distribution of plans via pdf via Newforma (hard copy upon request only; assume 2 hardcopies will be needed)
- Prepare correspondence
- Coordinate with TDOT Utilities on Certification

*Task 8 Deliverables:*

- *Utility “No Facilities” and “No Conflict” letters*
- *Utility Correspondence*

## **Construction Phase**

### **Task 9 – Before and After Study**

A Before and After Study will be conducted as part of this task. The Consultant will collect and compile data from the ATSPM system prior to the construction beginning along the corridor and will serve as a baseline. This data will be collected during the weekday AM, Noon, and PM peak periods while public schools are in session. Upon the completion of the construction, data will be collected via the same methodology utilizing the technology deployed. Data collected will include:

- Total travel time
- Running time
- Stopped time
- Average speed
- Number of stops

Collected data will be analyzed to determine emissions and translated to cost savings benefits using FHWA methodology. The report will describe the data collected and summarize this data in an executive summary describing the overall project, and any potential savings in both time and money, including benefit to cost ratios.

The draft Benefit-Cost report will be submitted to the City for one comment review cycle. Further, the Consultant will conduct an off team peer review of the Benefit-Cost report. The Consultant will respond to draft Benefit-Cost report comments in the Final Benefit-Cost report.

*Task 9 Deliverables:*

- *Draft Before and After Report*
- *Final Before and After Report*

### **Task 10 – Post Design Services**

This task includes anticipated Post Design Services for the project. The Consultant will assist the City appointed CEI with construction phase services, including the following:

- Attend Preconstruction meeting. Assume one meeting.
- Shop drawing equipment review. Assume 2 reviews.
- Request for Information (RFI) responses. Assume 2 RFI responses.
- Review of conditional and final acceptance testing results.

*Task 10 Deliverables:*

- Reviewed Shop Drawings
- Responses to RFI's
- Review of testing results

**Compensation**

The following fee is:

	<u><b>Fee</b></u>
Labor Plan Design and Specifications	\$ 266,865.00
Expenses	<u>\$ 2,353.60</u>
<b>Total Fee</b>	<b>\$ 269,218.60</b>

**Additional Services:**

The following are additional services beyond this scope of services that the City may request the Consultant to scope and negotiate at a later time.

- Integration – the Consultant may be requested to support the Contractor with integration of project devices into the existing City of Franklin signal system.
- Software development (dashboard) and integration – the Consultant may be requested to develop and integrate a software platform to integrate the high resolution controller data from the project controllers and create an ATSPM dashboard to report the results.
- Signal timing support – the Consultant may be requested to assist the City in the development and implementation of new signal timings along the SR 96 corridor.

**Excluded Items:**

- Survey and geotechnical data gathering
- ITS Architecture Update
- Signal Timing Studies
- Updated Coordinated Signal Timing Plans
- Biological Assessments
- Archeological Assessments
- Collection of new traffic counts or turning movement studies
- Traffic Control Plans (TDOT Standards will be referenced on the final plans)
- Utility Relocation Design Services and Plans
- Right-of-Way or easement acquisition, exhibits, descriptions or other related services