

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No 2014-0120**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **ARCADIS UNITED STATES, INCORPORATED**, 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:

**Engineering Services for Murfreesboro Road (SR 96 East)
Traffic Signal Timing Project**

1. **SCOPE OF SERVICES.** Consultant shall provide engineering and related technical services for the Project in accordance with the Scope of Work. The Scope of Work as found in **Attachment A** shall be considered as an integral part hereof.
2. Consultant shall be paid on a per intersection basis of **THREE THOUSAND SIX HUNDRED AND NO/100 DOLLARS (\$3,500.00)** for work performed for a total Fixed Fee of **FIFTY THOUSAND FOUR HUNDRED AND NO/100 DOLLARS (\$50,400.00)**.
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 _____ 201__.

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 [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.

Scope of Work for Murfreesboro Road Traffic Signal Timing Project

ARCADIS is pleased to submit a scope of services to the City of Franklin to coordinate 14 traffic signals along Murfreesboro Road System (Hwy 96). The following tasks will be performed by ARCADIS in this project:

Task 1: Data Collection

The traffic count data will be provided to ARCADIS by City of Franklin. The traffic count data will be used for developing the timing plans for Murfreesboro Road System. ARCADIS will collect intersections data such as, grades, clearance measurement, pedestrian clearance and status of detection. Field observation will be made during this time to identify the peak hour operational issues, queues and to study the traffic pattern. Additionally, the existing traffic signal timing will be reviewed to ensure they conform to all City, State and Federal guidelines.

Task 2: Model Development

City of Franklin will provide a Synchro model (from a previous study) of the study area to ARCADIS. The following intersections are included in the study area (i) Hwy 96 & Sturbridge Dr/Eddy Ln. (ii) Hwy 96 & Ralston Ln (iii) Hwy 96 & Mack Hatcher Pkwy (iv) Hwy 96 & Sugartree (v) Hwy 96 & Southwinds Blvd (vi) Hwy 96 & Center Point Pl (vii) Hwy 96 & Royal Oaks (viii) Hwy 96 & I-65 SB Ramps (ix) Hwy 96 & I-65 NB Ramps (x) Hwy 96 & Edward Curd Ln (xi) Hwy 96 & Carothers Pkwy (xii) Hwy 96 & Clovercroft Rd (xiii) S Royal Oaks & Center Point Pl (xiv) N Royal Oaks & Lakeview Dr. Information related to, but not limited to, intersection lane geometry, posted speed limit will be verified and revised as needed. ARCADIS will use the information from the field to modify the model. Existing signal timing information, peak hour traffic volumes will be used to build model for morning, mid-day, afternoon peak and evening peak hours. The Synchro model will be calibrated to ensure that it reflects the operations under existing conditions.

Task 3: Develop and Implement New Timing Plans

ARCADIS will develop a minimum of five timings plans, (AM, Mid-Day, PM, Off-Peak, and Weekend) for the study system. Synchro 8 will be used to develop these timing plans. The new timing plans will be developed to accommodate vehicular traffic and pedestrian traffic along Murfreesboro Road System. ARCADIS will provide and implement the new traffic signal timing data in the field.

Deliverables:

- Preliminary Signal Timing Report
- New timing plans by intersection developed using Synchro 8
- Signal timing input data summary by intersection
- Time-space plots by peak period and by intersection

- Time-of-day break points for the time-based patterns
- Synchro file

Task 4: Fine Tuning

ARCADIS will make necessary field adjustments to optimize the new traffic signal timing (It is assumed that a minimum five weekdays and one weekend fine tuning will be required). ARCADIS will meet with City of Franklin's staff for the approval of new traffic signals timing. ARCADIS will coordinate with City of Franklin as part of finalizing the timing plans.

Task 5: Performance Evaluation

ARCADIS will use the "before and after" travel time runs for a typical weekday to evaluate the performance of the corridor's MOE (Measure of Effectiveness). The performance measures that will be evaluated include travel time, number of stops and delay.

Deliverables:

Effectiveness Study Report

Breakdown:

Task	Fee to Complete
Data Collection	From the City of Franklin
Cost Per Intersection	\$3,600
Total Fee	\$50,400

ARCADIS will provide the above-referenced services for a fixed price of \$50,400.

Addendum 1

In order to investigate cross-coordination of Mack Hatcher Pkwy, Hwy 96 and South Royal Oaks, the following four intersections need to be included in the study:

- (i) S Royal Oaks & Mack Hatcher Pkwy
- (ii) S Royal Oaks & Rachel Spring/Forrest Crossing
- (iii) S Royal Oaks & Creekstone Blvd
- (iv) S Royal Oaks & Oak Meadow Dr

If these four intersections are included into the study, ARCADIS will provide the above-referenced services for a fixed price of \$64,800.



May 13, 2014

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator *Eric*
David Parker, P. E., City Engineer/CIP Executive
Paul Holzen, P. E., Director of Engineering
Carl Baughman, P. E., Traffic/Transportation Engineer
Jonathan Marston, P. E., Engineer III
Abby Gambill, TOC Operator

SUBJECT: Consideration of PSA with Arcadis U.S., Inc. for Murfreesboro Road Traffic Signal Timing Upgrades (COF Contract 2014-0120)

Purpose

The purpose of this memorandum is to provide information to the Board of Mayor and Aldermen (BOMA) to consider a proposed Professional Services Agreement (PSA) with Arcadis U.S., Inc. for signal timing upgrades on Murfreesboro Road (SR 96 East).

Background

The Murfreesboro Road corridor consists of fourteen (14) signalized intersections from Eddy Lane to Clovercroft Road, and including the Royal Oaks Blvd. intersections of Lakeview Drive and Center Point Place. The last comprehensive review of the system occurred in 2011 based on data collected in 2010, and included the widening of the Royal Oaks Blvd. intersection. Among the improvements that have been completed since the 2011 study are:

1. Dual right turns from westbound Murfreesboro Road onto the I-65 northbound ramp;
2. Reconfiguration of Southwinds Drive/Williamson Square driveway for concurrent phasing;
3. Lengthening of eastbound, northbound and southbound left turn lanes at Murfreesboro & Carothers;
4. I-65 widening through the Murfreesboro Road interchange has facilitated ramp access;
5. The major intersection at Mack Hatcher Parkway is scheduled to begin its widened condition on or about May 15-17, 2014.

Data collection: The Engineering Department Traffic Operations Center staff is applying its Miovision video data collection system to gather traffic counts for the consultant. Initial investigations of the counts collected to date reveal noticeable increases in various ramp movements at the I-65 interchange compared to 2010. The consultant has initiated the existing condition travel time and delay studies in order to incorporate school traffic and the widened condition at the Mack Hatcher intersection. The scope of services provides the option of adding four (4) intersections on South Royal Oaks Blvd. from Oak Meadow Drive to Mack Hatcher Parkway, but the release of school on May 21 will not allow counts with school traffic during this spring. It is anticipated that the timing upgrades could be installed by the resumption of school in August, and then the after-condition travel time and delay studies would identify the impacts. An addendum/extension to the project into late 2014 could provide for the four additional intersections.



Options

The Engineering Department has the computer models that have been maintained since the 2011 study, yet considers that a consultant investigation of upgrades would allow for an independent optimization of the corridor timings. The selected firm offers a real-time laboratory for testing of the recommended settings prior to implementation in the field. Therefore the options are:

1. Obtain professional services with the advantages of independent investigation and laboratory testing.
2. Perform in-house optimization with additional maintenance of its existing models.

Financial Impact

The 2014 budget provides for \$60,000 in signal timing upgrades, which would best be applied to this major City corridor. The fixed fee proposal for \$50,400 (\$3,600 per intersection) fits well within this budget. If the four (4) additional intersections would be incorporated in the fall, the fixed fee proposal would increase by \$14,400 to a total amount of \$64,800.

Recommendation

It is recommended that Contract COF 2014-0120 be approved by the Capital Investment Committee (CIC) and by BOMA in the amount of \$50,400 for a Notice to Proceed in June or early July, to be completed by November 2014. The contract should contain the option to incorporate, by amendment, four additional intersections on South Royal Oaks Blvd. at a cost of \$14,400 to be completed by January 2015.

Attachments

C: Gupta Borra, Arcadis Nashville