



HISTORIC
FRANKLIN
TENNESSEE

ITEM #9
CIC
02-7-13

MEMORANDUM

January 25, 2013

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
David Parker, City Engineer/CIP Executive
Paul Holzen, Director of Engineering
Carl Baughman, Traffic/Transportation Engineer

SUBJECT: **Consideration of Professional Services Agreement (COF 2013-0010) with RPM Transportation Consultants, LLC for Through the Green Subdivision Traffic Signal and Traffic Signal Interconnect Improvements Project in an Amount Not to Exceed \$25,000**

Purpose

The purpose of the memorandum is to provide information for the consideration of a professional services agreement (COF 2013-0010) with RPM Transportation Consultants, LLC for Through the Green Subdivision Traffic Signal and Traffic Signal Interconnect Improvements Project.

Background

The Through the Green final plat revision approved in December 2006 provided for the developer to bond the traffic signal design and construction for \$175,000 and the traffic signal interconnect conduit construction for \$20,000. Both sureties have been extended annually in January of each year. On January 24, 2013 the Franklin Municipal Planning Commission formally called both improvements.

To date various signal warrant studies have been performed for this intersection, with the latest TDOT response in November 2010 indicating that "satisfying the traffic signal volume warrants is contingent upon the completion of a future development." Two residential developments approved in 2012 will generate traffic sufficient to meet this condition. A design for the signal was submitted in 2006 and needs to be updated for the City to approve it. Finally, there are plat requirements for both Through the Green and Parkway Commons to complete the cross-connections across their common boundary in relation to the signal installation. Parkway Commons has an additional obligation to close its fuel station driveway at Columbia Avenue as a part of these access revisions. The City of Franklin is willing to install the signal prior to the resolution of the plat requirements.

Financial Impact

\$175,000 – Traffic Signal Bond

\$20,000 – Traffic Signal Interconnect Bond

\$90,000 – TOC 2013 Capital Budget – 89530 Machinery & Equipment

\$285,000 – Estimated Design and Construction Cost

Recommendation

Staff recommends approval of this contract. If this contract is approved, the design should be completed within 90 calendar days of the issuance of the Notice to Proceed.

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No 2013-0010**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **RPM TRANSPORTATION CONSULTANTS, LLC** 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:

**Through the Green Subdivision Traffic Signal and
Traffic Signal Interconnect Improvements Project**

1. SCOPE OF SERVICES. Consultant shall provide engineering and related technical services for the Project in accordance with the SCOPE OF SERVICES. The SCOPE OF SERVICES as found in **Attachment A** shall be considered as an integral part hereof.
2. Consultant shall be paid on an hourly basis for work performed based on the fee schedule as contained in **Attachment A** in the Amount Not To Exceed **TWENTY FIVE THOUSAND AND NO/100 DOLLARS (\$25,000.00)**. 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 [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.

Via Email: paul.holzen@franklintn.gov

October 10, 2012

Paul Holzen P. E. LEED, AP
City of Franklin
109 Third Avenue South, Suite 142
Franklin, TN 37064

**RE: Columbia Avenue (SR 6) and Southeast Parkway
Franklin, TN**
Subject: Proposal for Engineering Services

Dear Mr. Holzen:

On behalf of RPM Transportation Consultants, LLC, I am pleased to submit this proposal for your consideration for the above referenced project. The following information outlines RPM's understanding of the project as well as the scope of services and compensation associated with RPM providing engineering services for the project.

PROJECT UNDERSTANDING

The intersection of Columbia Avenue and Southeast Parkway has recently been improved to accommodate new development located along the west side of Columbia Avenue. The purpose of this project is to design a traffic signal to be installed at the intersection of Columbia Avenue and Southeast Parkway per recommended improvements for the intersection (see Attachment B). As recommended, the traffic signal at the intersection of Columbia Avenue and Southeast Parkway will be designed to include protected plus permitted left turn signal phasing on each approach. A right turn overlap phase will be provided for the eastbound and southbound approaches. Pedestrian signals will be provided across the west leg of the intersection. Pavement markings at the intersection will be modified to include stop lines on the northbound and southbound approaches of Columbia Avenue. Pavement markings on the westbound approach of Southeast Parkway will be modified to include "ONLY" pavement markings as recommended per MUTCD standards. Recommended traffic signage not already installed will also be specified.

Other than the pavement marking modifications stated above, no additional intersection improvements are planned as a part of this project or included in this scope.

In addition to the design of the traffic signal at the intersection of Columbia Avenue and Southeast Parkway, survey and design will be provided for interconnect conduit along the west side of Columbia Avenue. This conduit will extend from the northern boundary of the Parkway



Commons property to the northern boundary of the Through the Green Property. Each end of the fiber run will terminate at a fiber optic pull box.

SCOPE OF SERVICES

The RPM team's role is to provide construction documents, bidding, and permitting assistance for the project understanding as described above. In order to accomplish the objectives for the project, this work is divided into six (6) primary tasks, which are described as follows:

Task 1 - Data Collection and Survey

Base survey information for the signal design and interconnect conduit will be collected by Cherry Land Surveying. This information will be supplemented by record drawings, field observations and measurements by RPM.

Task 2 – Construction Documents

Utilizing base survey information obtained in Task 1, RPM will prepare plans and specifications for the project. These plans will conform to current City of Franklin and TDOT standards. RPM will coordinate with City staff throughout the plan development process.

RPM will prepare construction documents and specifications, which are acceptable for bidding purposes. These documents will include traffic signal layout, interconnect conduit layout, notes, details, specifications, and tabulated quantities. These construction documents will conform to City of Franklin standards and to the requirements specified in the MUTCD. Based on discussions with the City staff, RPM will determine if special signal phasing or detection will be needed.

RPM will provide to the client two (2) full-size, bound copies and one (1) digital (.pdf) copy of the plans.

Task 3 – Permitting Assistance

This scope of work assumes all necessary permits will be obtained by the City of Franklin. RPM will assist the City in obtaining necessary review and approvals of the design plans from the Tennessee Department of Transportation (TDOT) for the purpose of obtaining a permit to work in the state right-of-way.

Task 4 – Bidding Assistance

RPM will prepare a bid manual for the project based on City of Franklin standards. RPM will provide to the client two (2) full-size, bound copies, and one (1) digital (.pdf) copy of the bid manual.

Following final approval by the City and permission to proceed with letting, RPM will assist the City with bid opening, bid review, and contractor selection.



Task 5 – Construction Administration

RPM will provide responses to requests for information and clarifications as needed by the City or contractor during construction. This scope includes up to two field visits for onsite clarifications, as needed. RPM will provide review of material submittals as made by the contractor. RPM shall not have the authority or responsibility to supervise, inspect, or direct the construction, and excludes any responsibility for contractor's means, methods or safety precautions and practices.

Task 6 - Project Coordination and Meetings

RPM will conduct preliminary discussions with City staff to discuss design goals and requirements for the signal installation. RPM will coordinate with the City throughout the development of final construction documents. RPM will coordinate with City staff to facilitate review and approval of the final construction documents. RPM will attend meetings as needed. This scope of work assumes the attendance at one (1) meeting during the course of the project.

COMPENSATION

Compensation for the work specified above is as follows:

(As requested by the City, survey and design fees for traffic signal and interconnect conduit have been segregated.)

Task	Description of Work	Fee
1a	Survey – Traffic Signal	\$3,750.00
1b	Survey – Interconnect Conduit	\$500.00
2a	Construction Documents – Traffic Signal	\$8,500.00
2b	Construction Documents – Interconnect Conduit	\$1,250.00
Sub-Total (lump sum)		\$14,000.00
3	Permitting Assistance	\$1,750.00
4	Bidding Assistance	\$3,750.00
5	Construction Administration	\$1,500.00
6	Project Coordination and Meetings	\$2,750.00
Sub-Total (hourly)		\$9,750.00
Estimated Reimbursable Expenses		\$1,250.00
TOTAL		\$25,000.00

Work performed for Task 1 and 2 will be billed on a lump sum basis. The fee for Tasks 3 through 6 are estimated amounts and will be billed on an hourly basis using RPM Transportation Consultants, LLC's standard hourly billing rates. Services required in excess of the estimated amounts will be billed hourly as additional services. Payment for work specified above will be required within thirty (30) days of receipt of the invoice for the work. Reimbursable costs such as printing, overnight mailing and travel will be billed direct.

**PRESUMPTIONS AND EXCLUSIONS**

The following constitute work components that RPM excludes from the base scope of services, but which can be provided as additional services if so desired by the client.

1. RPM excludes the design/planning or relocation of major systems of gas, cable, fiber optic, telephone or electric utilities.
2. RPM excludes geotechnical studies, environmental studies such as wetlands, and/or Phase I Environmental reports.
3. Permanent utility easements, if needed, for traffic signal will be identified in the plans; however, this scope excludes exhibits, legal descriptions, easement documents, or other services related to right-of-way acquisition, and construction or slope easements.
4. RPM excludes any street light design other than that directly associated with the traffic signal design.
5. RPM shall not have the authority or responsibility to supervise or direct the construction, and excludes any responsibility for contractor's means, methods or safety precautions and practices.

ADDITIONAL SERVICES

Any work, other than the scope of services outlined herein, shall be designated additional services. At such time that it is determined that these additional services are required, RPM Transportation Consultants, LLC reserves the right to amend this proposal or execute a separate agreement that will provide such services. Services desired by the client, but not specifically outlined herein, can be provided on an hourly basis in accordance with RPM Transportation Consultants, LLC's standard hourly rates.

~~This proposal is valid for a period of sixty (60) days, after which time RPM reserves the right to review and revise the fee.~~

We appreciate the opportunity to work with you on this project. If you have any questions or need additional information please contact me.

Sincerely,

RPM Transportation Consultants, LLC

A handwritten signature in black ink, appearing to read 'D. Spann', written over a horizontal line.

Daniel J. Spann, P.E., PTOE



**ATTACHMENT B
SHADOW GREEN – SIGNAL WARRANT STUD
CONCLUSIONS AND RECOMMENDATIONS
JULY 2010**

7. CONCLUSIONS AND RECOMMENDATIONS

Signal warrant analyses as well as capacity analyses were performed in order to determine the need for roadway and traffic control improvements at the study area intersection. Analyses indicate that the intersection of Columbia Avenue and Southeast Parkway/Shadow Green Drive under existing conditions including 50% right turn volumes fully satisfies Warrant 8 (Roadway Network) and collectible crash criteria for Warrant 7 (Crash Experience). Also, with 100% of the right turn volumes included, the existing intersection satisfies Warrant 1B (Interruption of Continuous Traffic) and Warrant 2 (Four Hour Volume).

Analyses also indicated that the intersection will satisfy additional volume related warrants for the installation of a traffic signal following the completion of the Shadow Green development. Specifically, analyses indicate signal Warrants 1, 2, and 3 will be fully satisfied once the remainder of the proposed development reaches approximately 25 percent completion. This equates to approximately two of the remaining five commercial land uses identified by the developer (Lots 1 through 7).

In addition to Warrant 7, the crash rate for the intersection was calculated based on the number of crashes that occurred over the most recent two-year period. According to the 24-hour traffic counts obtained from TDOT and the hourly count data collected by RPM Transportation Consultants, LLC, the 2010 Annual Average Daily Traffic for the intersection is approximately 26,200 vehicles per day (vpd). This results in a calculated intersection crash rate (R) of 1.05 per million entering vehicles (MEV). This is five times the statewide average crash rate (R_s) of 0.212 MEV for an urban intersection on a two-lane roadway. In addition, the calculated critical crash rate (R_c) for the intersection is 0.48 with a severity index (SI) of 0.2. Based on this analysis, the crash rates calculated for the intersection of Columbia Avenue and Southeast Parkway/Shadow Green Drive clearly identify the intersection as having safety issues that should be addressed.

Capacity analyses indicate critical turning movements at the intersection of Columbia Avenue and Southeast Parkway/Shadow Green Drive currently experience significant delay under unsignalized conditions. This is primarily due to significant volumes on Columbia Avenue and the lack of sufficient gaps for left turn and through movements from the minor legs. Analyses indicate these conditions will continue to degrade without a traffic signal.

Studies have shown a tendency for motorists to become more aggressive and risk smaller gaps when sufficient gaps are unavailable in conjunction with extreme delay. This behavior can result in an increase in right-angle crashes. Also, it is important to note that all of the angle crashes at the intersection have taken place in 2010 following the addition of the eastbound Shadow Green Drive approach. Therefore, in order to provide safe and efficient traffic operations at the subject

intersection, it is recommended that a traffic signal be installed in conjunction with the development of the next commercial land use.

The signal should be designed to provide protected plus permitted left turn signal phases on each approach as well as an eastbound right turn overlap phase. In addition to the installation of a traffic signal, the following improvements, shown in Figure 10, are recommended:

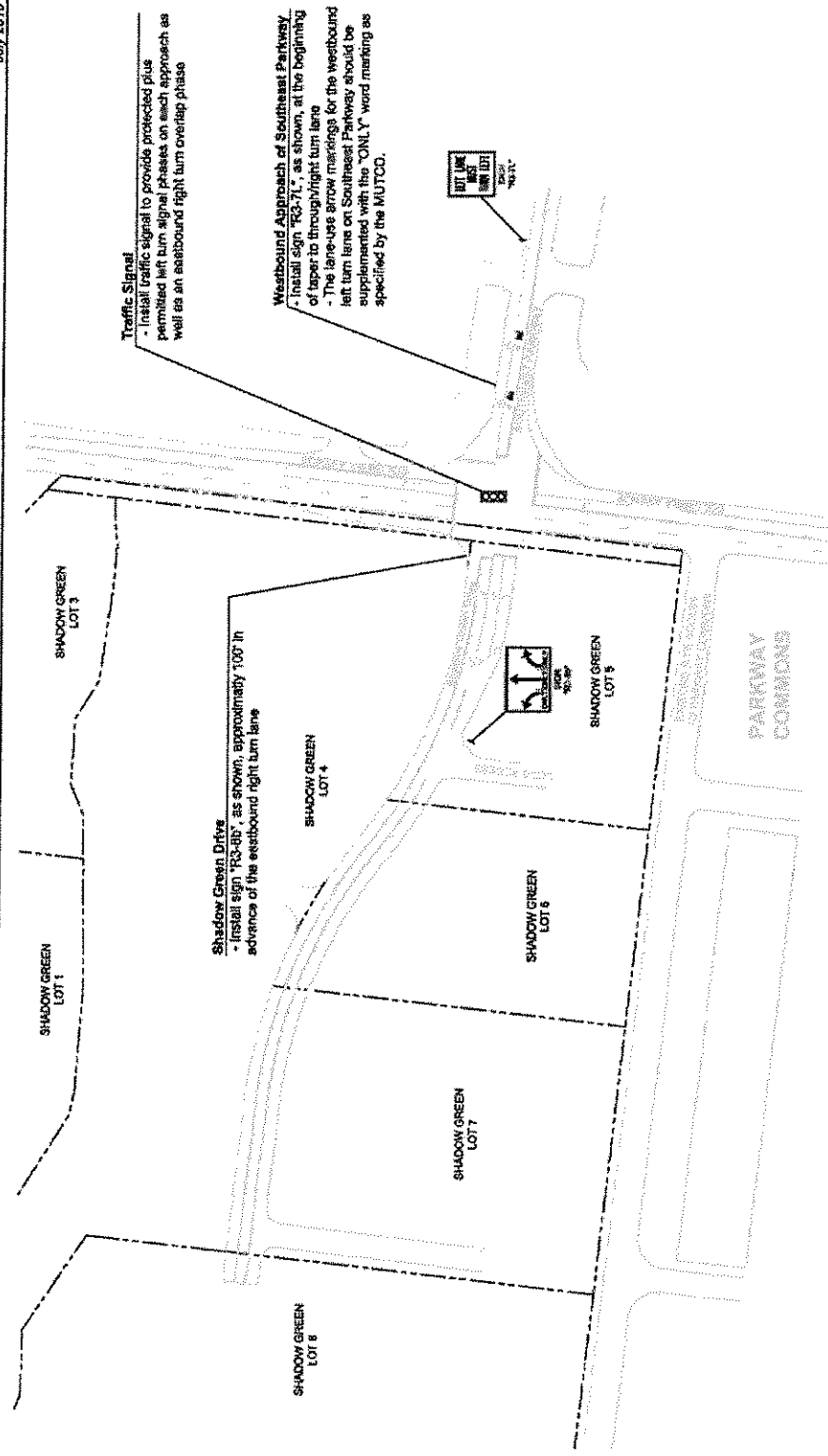
- An intersection lane control sign "R3-8b" as specified by the *Manual on Uniform Traffic Control Devices* (MUTCD) should be installed on the eastbound approach of Shadow Green Drive. As shown in Figure 10, this sign should be located approximately 100 feet in advance of the eastbound right turn lane.
- The lane-use arrow markings for the westbound left turn lane on Southeast Parkway should be supplemented with the "ONLY" word marking as specified by the MUTCD. A movement lane control sign "R3-7L" should be installed on the westbound approach of Southeast Parkway. As shown in Figure 10, this sign should be located at the beginning of the taper for the shared through/right turn lane.

In conclusion, the implementation of the above recommendations should provide safe and efficient traffic operations for the intersection of Columbia Avenue and Southeast Parkway/Shadow Green Drive following the completion of the proposed development.



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Shadow Green - Signal Warrant Study



Recommended Improvements



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Figure 10.

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