

City of Columbia

701 East Broadway, Columbia, Missouri 65201



Agenda Item Number: R 188-14

Department Source: Public Works

To: City Council

From: City Manager & Staff

Council Meeting Date: October 6, 2014

Re: Professional Engineering Services Agreement for the Route 740 (Stadium Boulevard) and Old Route 63 Intersection Improvement Project

Documents Included With This Agenda Item

Council memo, Resolution/Ordinance, Exhibits to Resolution/Ordinance

Supporting documentation includes: Maps, Plats and Plans

Executive Summary

Authorizing the City Manager to execute a Professional Engineering Services agreement with HR Green, Inc., related to the Route 740 (Stadium Boulevard) and Old Route 63 Intersection Improvements project. Tasks include design engineering of street pavement, traffic signals, storm sewers, retaining walls, erosion control, landscaping, and other items necessary to complete the work as outlined in the agreement.

Discussion

The Route 740 (Stadium Boulevard) and Old Route 63 intersection is currently signalized and has no marked crosswalks or pedestrian signals. The proposed project includes adding pedestrian facilities and beautification of the intersection, as well as vehicular capacity improvements. The vehicular capacity improvements include dual left turns from northbound to westbound movement and a westbound to northbound right turn lane.

The City of Columbia will fund 50% of this project as part of a cost apportionment agreement with the Missouri Highways and Transportation Commission (MHTC), and will serve as the lead agency for the design, contract administration, utility coordination and easement acquisition for this project. Construction is expected to be underway in 2015.

Upon project completion, the MHTC will convey approximately 700 linear feet of Old Route 63 to the City through quit claim deed. The length of roadway to be conveyed, and to become part of the City's roadway system, begins approximately 132 feet south of the intersection and continues south approximately 700 feet.

Fiscal Impact

Short-Term Impact: To date, \$1,479,095 has been appropriated to this project. The cost of the engineering services agreement is \$184,144.81. The City will fund 50%, or \$92,072.41.

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Long-Term Impact: The total project cost estimate is \$1,468,234.81, which includes engineering design, acquisition and construction. The City's share of the total cost is estimated to be \$734,117.41, and will be funded by 0.25% Capital Improvement Sales Tax. Upon completion of the project, the Commission will convey approximately 700 linear feet of Old Route 63 to the City. The increase in maintenance costs to the City will be approximately \$3,220 per year.

Vision, Strategic & Comprehensive Plan Impact

Vision Impact: Transportation

Strategic Plan Impact: Infrastructure

Comprehensive Plan Impact: Infrastructure

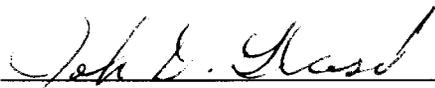
Suggested Council Action

Authorize the City Manager to execute a Professional Engineering Services agreement with HR Green, Inc. for the Route 740 (Stadium Boulevard) and Old Route 63 Intersection Improvement project.

Legislative History

5/16/13 - Columbia Area Transportation Study Organization submitted letter of support for the project to the Public Works Department.

4/21/14 (Ord 22028) Authorizing a cost apportionment agreement with MHTC for improvements at the intersection of Route 740 (Stadium Boulevard) and Old Route 63.


Department Approved


City Manager Approved

Introduced by _____ Council Bill No. R 188-14

A RESOLUTION

authorizing an agreement for professional engineering services with HR Green, Inc. for design of the Route 740 (Stadium Boulevard) and Old Route 63 intersection improvement project.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. The City Manager is hereby authorized to execute an agreement for professional engineering services with HR Green, Inc. for design of the Route 740 (Stadium Boulevard) and Old Route 63 intersection improvement project. The form and content of the agreement shall be substantially as set forth in "Exhibit A" attached hereto and made a part hereof.

ADOPTED this _____ day of _____, 2014.

ATTEST:

City Clerk

Mayor and Presiding Officer

APPROVED AS TO FORM:

City Counselor

COPY

**AGREEMENT
for
PROFESSIONAL ENGINEERING SERVICES
between
THE CITY OF COLUMBIA, MISSOURI
and
HR GREEN, INC.**

THIS AGREEMENT made as of ____ day of _____, 20__, by and between the City of Columbia, Missouri, hereinafter called the CITY, and HR GREEN, INC., hereinafter called the ENGINEER.

WITNESSETH, that whereas the CITY intends to make improvements as described below, hereinafter called the PROJECT, consisting of the following:

Improvements to the intersection of Stadium Boulevard / Old 63 including adding pedestrian facilities, beautification of the intersection, and adding turn lanes to the intersection. This project is approved as a 50/50 MoDOT cost share project, except for a portion of off-system sidewalk.

NOW, THEREFORE, in consideration of the mutual covenants set out herein the parties agree as follows:

ENGINEER shall serve as CITY’s professional engineering contractor in those assignments to which this Agreement applies, and shall give consultation and advice to CITY during the performance of the services. All services shall be performed under the direction of a professional engineer registered in the State of Missouri and qualified in the particular field.

SECTION 1 - AUTHORIZATION OF SERVICES

1.1 ENGINEER shall not undertake to begin any of the services contemplated by this agreement until directed in writing to do so by CITY. CITY may elect to authorize the PROJECT as a whole or in parts.

1.2 Authorized work may include services described hereafter as Basic Services or as Additional Services of ENGINEER.

SECTION 2 - BASIC SERVICES OF ENGINEER

2.1 General

2.1.1 Perform professional engineering services as set forth in Attachment A - "Scope of Basic Services," dated September 18, 2014.

2.1.2 The ENGINEER will designate the following listed individuals as its project team with responsibilities as assigned. The ENGINEER shall dedicate whatever additional resources are necessary to accomplish the PROJECT within the specified time frame but will not remove these individuals from the assigned tasks for any reason within the control of the ENGINEER without the written approval of the CITY.

<u>Name and Title</u>	<u>Assignment</u>
Jason Dohrmann, PE	Project Manager
Rick Brown, PE., PTOE	Traffic Services / Technical Advisor
Kori Rauh, EI	Staff Engineer / Plan Development

All of the services required hereunder will be performed by the ENGINEER or under its supervision and all personnel engaged in the work shall be fully qualified and authorized or permitted under state and local law to perform such services.

None of the work or services covered by this Agreement shall be subcontracted without the prior written approval of the CITY and any work or services so subcontracted shall be subject to the provisions of this Agreement.

2.1.3 SUBLETTING, ASSIGNMENT OR TRANSFER

No portion of the work covered by this contract, except as provided herein, shall be sublet or transferred without the written consent of the Local Agency. The subletting of the work shall in no way relieve the Engineer of his primary responsibility for the quality and performance of the work. It is the intention of the Engineer to engage subcontractors for the purposes of:

<u>Sub-Consultant Name</u>	<u>Address</u>	<u>Services</u>
PGAV Planners	Saint Louis Place, Ste. 1000 200 North Broadway St. Louis, MO 63102	LA / Irrigation
TSi Engineering, Inc.	5850 Arsenal Street St. Louis, MO 63139	Geotechnical
Engineering Surveys & Services, Inc.	1113 Fay Street Columbia, MO 65201	Surveying
EFK Moen, Inc.	13523 Barrett Pkwy Dr., Ste. 250 St. Louis, MO 63021-3802	QA/QC / Support

2.1.4 DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS:

- A DBE Goal: The following DBE goal has been established for this Agreement. The dollar value of services and related equipment, supplies, and materials used in furtherance thereof which is credited toward this goal will be based on the amount actually paid to DBE firms. The goal for the percentage of services to be awarded to DBE firms is 10% of the total Agreement dollar value.
- B. DBE Participation Obtained by Engineer: The Engineer has obtained DBE participation, and agrees to use DBE firms to complete, 10% of the total services to be performed under this Agreement, by dollar value. The DBE firms which the Engineer shall use, and the type and dollar value of the services each DBE will perform, is as follows:

DBE FIRM		PERCENTAGE		
Mailing Address	Type of DBE Service	Total \$ Value of DBE Subcontract	Contract \$ Amount to Apply to DBE Goal	Subcontract Dollar Value Applicable to Goal
TSi Engineering, Inc. 5850 Arsenal Street St. Louis, MO 63139	Geotech	\$9,900.00	\$9,900.00	\$9,900.00
EFK Moen, LLC. 13523 Barrett Pkwy Dr. Ste.250 St. Louis, MO 63021-3802	QA/QC and Support	\$8,300.00	\$8,300.00	\$8,300.00

2.2 The ENGINEER shall furnish such periodic reports as the CITY may request pertaining to the work or services undertaken pursuant to this Agreement, the costs and obligations incurred or to be incurred, and any other matters covered by this Agreement.

2.3 The ENGINEER shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Agreement and any other records as deemed necessary by the CITY to assure proper accounting for all project funds. These records must be available to the CITY or its authorized representatives, for audit purposes, and must be retained for three (3) years after expiration or completion of this Agreement.

2.4 OWNERSHIP OF DOCUMENTS

- A. All drawings and documents prepared in performance of this Agreement shall be delivered to and become the property of the City upon suspension, abandonment, cancellation, termination, or completion of the Engineer's services hereunder; provided, however,

1. the Engineer shall have the right to their future use with written permission of the City;
2. the Engineer shall retain its rights in its standard drawing details, designs, specifications, CADD files, databases, computer software, and any other proprietary property; and
3. the Engineer shall retain its rights to intellectual property developed, utilized, or modified in the performance of the services subject to the following:

A. Copyrights. City, as the contracting agency, reserves a royalty-free, nonexclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Governmental purposes:

I. The copyright in any works developed under this agreement, or under a subgrant or contract under this agreement; and

II. Any rights of copyright to which City, its Engineer or subconsultant purchases ownership with payments provided by this agreement.

B. Patents. Rights to inventions made under this agreement shall be determined in accordance with 37 C.F.R. Part 401. The standard patent rights clause at 37 C.F.R. § 401.14, as modified below, is hereby incorporated by reference.

I. The terms "to be performed by a small business firm or domestic nonprofit organization" shall be deleted from Paragraph (g)(1) of the clause;

II. Paragraphs (g)(2) and (3) of the clause shall be deleted; and

III. Subsection (l) of the clause, entitled "communications" shall read as follows: "(l) Communications. All notifications required by this clause shall be submitted to the Public Works Director."

IV. The following terms in 37 C.F.R. 401.14 shall for the purpose of this Agreement have the following meaning:

Contractor - Engineer

Government and Federal Agency – Local Agency

Subcontractor – Subconsultant

4. Basic survey notes, design computations, and other data prepared under this Agreement shall be made available for use by the City without further compensation and without restriction or limitation on their use.

B. The City may incorporate any portion of the deliverables into a project other than that for which they were performed, without further compensation to the Engineer; provided however, that (1) such deliverables shall thereupon be deemed to be the work product of the City and the City shall use same at its sole risk and expense; and (2) the City shall remove the Engineer's name, seal, endorsement, and all other indices of authorship from the deliverables.

2.5 STANDARDS

The Engineer shall be responsible for working with the Local Agency in determining the appropriate design parameters and construction specifications for the project using good engineering judgment based on the specific site conditions, Local Agency needs, and guidance provided in the most current version of EPG 136 LPA Policy. If the project is on the state highway system or is a bridge project, then the latest version of MoDOT's Engineering Policy Guide (EPG) and Missouri Standard Specifications for Highway Construction shall be used (see EPG 136.7). The project plans must also be in compliance with the latest ADA (Americans with Disabilities Act) Regulations.

SECTION 3 - ADDITIONAL SERVICES OF ENGINEER

3.1 General

If authorized in writing by CITY, and agreed to in writing by ENGINEER, ENGINEER shall furnish or obtain from others Additional Services of the following types which are not considered normal or customary Basic Services. The scope of Additional Services may include:

3.1.1 Financial Consultation

Consult with CITY's fiscal agents and bond attorneys and provide such engineering data as required for any bond prospectus or other financing requirements

3.1.2 Property Procurement Assistance

Provide consultation and assistance on property procurement as related to professional engineering services being performed.

3.1.3 Obtaining Services of Others

Provide through subcontract the services or data set forth in Attachment A.

3.1.4 Preliminary or final engineering design of capital facilities except as specifically identified herein.

3.1.5 Preparation of reports, data, application, etc., in connection with modifications to FEMA floodplain definition and/or mapping.

3.1.6 Extra Services

Services not specifically defined heretofore that may be authorized in writing by CITY.

SECTION 4 - RESPONSIBILITIES OF CITY

4.1 Provide full information as to CITY's requirements for the PROJECT.

4.2 Assist ENGINEER by placing at ENGINEER's disposal available information pertinent to the assignment including previous reports and other data relative thereto, including the items outlined in Attachment A - "Scope of Basic Services," dated September 18, 2014.

4.3 Guarantee access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform his services under this Agreement.

4.4 Examine all studies, reports, sketches, estimates, Bid Documents, Drawings, proposals and other documents presented by ENGINEER and render in writing decisions pertaining thereto.

4.5 Provide such professional legal, accounting, financial and insurance counseling services as may be required for the PROJECT.

4.6 Designate John Glascock, PE, as CITY's representative with respect to the services to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define CITY's policies and decisions with respect to materials, equipment, elements and systems to be used in the PROJECT, and other matters pertinent to the services covered by this Agreement.

4.7 Give prompt written notice to ENGINEER whenever CITY observes or otherwise becomes aware of any defect in the PROJECT.

4.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the PROJECT and such approvals and consents from others as may be necessary for completion of the PROJECT.

4.9 Furnish ENGINEER data such as probings and subsurface explorations, with appropriate professional interpretations; property, boundary, easement, right-of-way, topographic and utility surveys; zoning and deed restriction; and other special data or consultations, all of which ENGINEER may rely upon in performing his services under this Agreement.

SECTION 5 - PERIOD OF SERVICE

5.1 This Agreement will become effective upon the first written notice by CITY authorizing services hereunder.

5.2 This Agreement shall be applicable to all work assignments authorized by CITY subsequent to the date of its execution and shall be effective as to all assignments authorized.

5.3 Services shall be started within 10 calendar days of Notice to Proceed and completed by March 18, 2016. CITY shall have the right to establish performance times for individual phases or elements of the PROJECT by delivering a written schedule setting out the performance times to the ENGINEER.

The Local Agency will grant time extensions for delays due to unforeseeable causes beyond the control of and without fault or negligence of the Engineer. Requests for extensions of time shall be made in writing by the Engineer, before that phase of work is scheduled to be completed, stating fully the events giving rise to the request and justification for the time extension requested.

SECTION 6 - COMPENSATION

For services provided under this contract, the Local Agency will compensate the Engineer as follows:

- A. For design services, including work through the construction contract award stage, the Local Agency will pay the Engineer the actual costs incurred plus a predetermined fixed fee of \$15,707.61, with a ceiling established for said design services in the amount of \$184,144.81, which amount shall not be exceeded.
- B. For construction inspection services, the Local Agency will pay the Engineer the actual costs incurred plus a predetermined fixed fee of \$0.00, with a ceiling established for said inspection services in the amount of \$0.00, which amount shall not be exceeded.
- C. The compensation outlined above has been derived from estimates of cost which are detailed in Attachment B. Any major changes in work, extra work, exceeding of the contract ceiling, or change in the predetermined fixed fee will require a supplement to this contract, as covered in Article III - ADDITIONAL SERVICES.
- D. Actual costs in Sections A and B above are defined as:
 - 1. Actual payroll salaries paid to employees for time that they are productively engaged in work covered by this contract, plus
 - 2. An amount estimated at 48.10% of actual salaries in Item 1 above for payroll additives, including payroll taxes, holiday and vacation

pay, sick leave pay, insurance benefits, retirement and incentive pay, plus

3. An amount estimated at 129.30% of actual salaries in Item 1 above for general administrative overhead, based on the Engineer's system for allocating indirect costs in accordance with sound accounting principles and business practice, plus
4. Other costs directly attributable to the project but not included in the above overhead, such as vehicle mileage, meals and lodging, printing, surveying expendables, and computer time, plus
5. Project costs incurred by others on a subcontract basis, said costs to be passed through the Engineer on the basis of reasonable and actual cost as invoiced by the subcontractors.

E. The rates shown for additives and overhead in Sections VII. D.2 and VII. D.3 above are approximate and will be used for interim billing purposes. Final payment will be based on the actual rates experienced during the period of performance, as indicated by the Engineer's accounting records, and as determined by final audit of the Engineer's records by MoDOT.

F. The payment of costs under this contract will be limited to costs which are allowable under 23 CFR 172 and 48 CFR 31.

G. **METHOD OF PAYMENT** - Partial payments for work satisfactorily completed will be made to the Engineer upon receipt of itemized invoices by the Local Agency. Invoices will be submitted no more frequently than once every two weeks and must be submitted monthly for invoices greater than \$10,000. A pro-rated portion of the fixed fee will be paid with each invoice. Upon receipt of the invoice and progress report, the Local Agency will, as soon as practical, but not later than 45 days from receipt, pay the Engineer for the services rendered, including the proportion of the fixed fee earned as reflected by the estimate of the portion of the services completed as shown by the progress report, less partial payments previously made. A late payment charge of one and one half percent (1.5%) per month shall be assessed for those invoiced amount not paid, through no fault of the Engineer, within 45 days after the Local Agency's receipt of the Engineer's invoice. The Local Agency will not be liable for the late payment charge on any invoice which requests payment for costs which exceed the proportion of the maximum amount payable earned as reflected by the estimate of the portion of the services completed, as shown by the progress report. The payment, other than the fixed fee, will be subject to final audit of actual expenses during the period of the Agreement.

6.1.1 For services performed, CITY shall pay ENGINEER the sum of amounts determined as follows:

6.1.1.1 For time spent by personnel, payment at the hourly rates indicated in the "Schedule of Hourly Labor Billing Rates" (attached). Such rates include overhead and profit. The schedule is effective to March, 2015, and may be revised thereafter.

6.1.1.2 For outside expenses incurred by ENGINEER, such as authorized travel and subsistence, commercial services, and incidental expenses, the cost to ENGINEER.

6.1.1.3 For reproduction, printing, long-distance telephone calls, company vehicle usage, testing apparatus, computer services and computer-assisted drafting (CAD), amounts will be charged according to the ENGINEER's standard rates in effect at the time service is provided.

6.1.1.4 For professional services rendered by others as subcontractor(s) to ENGINEER such as surveying, real property descriptions, soil borings, subsurface investigations, laboratory testing, field quality control tests, progress photos, or other activities required or requested by CITY, will be billed at the cost to ENGINEER.

6.1.1.5 For time spent by outside individual professional consultants employed by ENGINEER in providing services to CITY, the cost to ENGINEER. Expenses incurred by such outside consultants in service to CITY shall be reimbursable in accordance with 6.1.1.2 above.

6.1.2 Total payment for Scope of Services and all other expenses and costs to the City under this agreement and described herein **shall not exceed \$184,144.81.**

6.2 Payments

6.2.1 The ENGINEER shall submit an invoice for services rendered to the CITY not more than once every month. Upon receipt of the invoice and progress report, the CITY will, as soon as practical, pay the ENGINEER for the services rendered, provided the CITY does not contest the invoice.

SECTION 7 - GENERAL CONSIDERATIONS

7.1 Insurance

7.1.1 ENGINEER'S INSURANCE: ENGINEER agrees to maintain, on a primary basis and at its sole expense, at all times during the life of this contract the following insurance coverages, limits, including endorsements described herein. The requirements contained herein, as well as CITY's review or acceptance of insurance maintained by ENGINEER is not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by ENGINEER under this contract

Commercial General Liability ENGINEER agrees to maintain Commercial General Liability at a limit of liability not less than **\$2,000,000** combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death. Coverage shall not contain any endorsement(s) excluding nor limiting Contractual Liability or Cross Liability. If the contract involves any underground/digging operations, the general liability certificate shall include X, C and U (Explosion, Collapse and Underground) coverage.

Professional Liability ENGINEER agrees to maintain Professional (Errors & Omissions) Liability at a limit of liability not less than **\$2,000,000** per claim and **\$2,000,000** aggregate. For policies written on a "Claims-Made" basis, ENGINEER agrees to maintain a Retroactive Date prior to or equal to the effective date of this contract. In the event the policy is canceled, non-renewed, switched to an Occurrence Form, retroactive date advanced; or any other event triggering the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this contract, ENGINEER agrees to purchase a SERP with a minimum reporting period not less than two (2) years. The requirement to purchase a SERP shall not relieve ENGINEER of the obligation to provide replacement coverage.

Business Automobile Liability ENGINEER agrees to maintain Business Automobile Liability at a limit of liability not less than **\$2,000,000** combined single limit for any one occurrence and not less than \$150,000 per individual, covering both bodily injury, including accidental death, and property damage, to protect themselves from any and all claims arising from the use of the ENGINEER's own automobiles, and trucks; hired automobiles, and trucks; and automobiles both on and off the site of work. Coverage shall include liability for Owned, Non-Owned & Hired automobiles. In the event ENGINEER does not own automobiles, ENGINEER agrees to maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation Insurance & Employers' Liability ENGINEER agrees to take out and maintain during the life of this contract, Employers' Liability and Workers' Compensation Insurance for all of their employees employed at the site of the work, and in case any work is sublet, the ENGINEER shall require the subcontractor similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the ENGINEER. Workers' Compensation coverages shall meet Missouri statutory limits. Employers' Liability minimum limits shall be \$500,000 each employee, \$500,000 each accident and \$500,000 policy limit. In case any class of employees engaged in hazardous work under this contract is not protected under the Workers' Compensation Statute, the ENGINEER shall provide and shall cause each subcontractor to provide Employers' Liability Insurance for the protection of their employees not otherwise protected.

Excess/Umbrella Liability The above liability limits may be satisfied by any combination of primary and excess/umbrella liability policies.

Additional Insured ENGINEER agrees to endorse CITY as an Additional Insured with a CG 2026 Additional Insured – Designated Person or Organization endorsement, or similar endorsement, to the Commercial General Liability. The Additional Insured shall read “City of Columbia.”

Waiver of Subrogation ENGINEER agrees by entering into this contract to a Waiver of Subrogation for each required policy herein except professional liability. When required by the insurer, or should a policy condition not permit ENGINEER to enter into an pre-loss agreement to waive subrogation without an endorsement, then ENGINEER agrees to notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition specifically prohibiting such an endorsement, or voids coverage should ENGINEER enter into such an agreement on a pre-loss basis.

Certificate(s) of Insurance ENGINEER agrees to provide CITY with Certificate(s) of Insurance evidencing that all coverages, limits and endorsements required herein are maintained and in full force and effect. Said Certificate(s) of Insurance shall include a minimum thirty (30) day endeavor to notify due to cancellation or non-renewal of coverage. The Certificate(s) of Insurance shall name the City as additional insured in an amount as required in this contract and contain a description of the project or work to be performed.

Right to Revise or Reject CITY reserves the right, but not the obligation, to review and revise any insurance requirement, not limited to limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work / specifications affecting the applicability of coverage. Additionally, the CITY reserves the right, but not the obligation, to review and reject any insurance policies failing to meet the criteria stated herein or any insurer providing coverage due of its poor financial condition or failure to operating legally.

7.1.2 **HOLD HARMLESS AGREEMENT:** To the fullest extent not prohibited by law, ENGINEER shall indemnify and hold harmless the City of Columbia, its directors, officers, agents and employees from and against all claims, damages, losses and expenses (including but not limited to attorney's fees) arising by reason of any negligent act or failure to act, or willful misconduct, of ENGINEER, of any subcontractor (meaning anyone, including but not limited to consultants having a contract with ENGINEER or a subcontractor for part of the services), of anyone directly or indirectly employed by ENGINEER or by any subcontractor, or of anyone for whose acts the ENGINEER or its subcontractor may be liable, in connection with providing these services except as provided in this Agreement. This provision does not, however, require ENGINEER to indemnify, hold harmless or defend the City of Columbia from its own negligence, except as set out herein.

7.1.3 Professional Oversight Indemnification

The ENGINEER understands and agrees that CITY has contracted with ENGINEER based upon ENGINEER's representations that ENGINEER is a skilled professional and fully able to provide the services set out in this Agreement. In addition to any other indemnification set out in this Agreement, ENGINEER agrees to defend, indemnify and hold and save harmless the CITY from any and all claims, settlements and judgments whatsoever arising out of the CITY's alleged negligence in hiring or failing to properly supervise the ENGINEER.

The insurance required by this Agreement shall include coverage which shall meet ENGINEER's obligations to indemnify the CITY as set out above and the CITY shall be named as co-insured for such insurance.

7.2 Professional Responsibility

7.2.1 ENGINEER will exercise reasonable skill, care, and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted good professional engineering practices. If the ENGINEER fails to meet the foregoing standard, ENGINEER will perform at its own cost, and without reimbursement from CITY, the professional engineering services necessary to correct errors and omissions which are caused by ENGINEER's failure to comply with above standard, and which are reported to ENGINEER within one year from the completion of ENGINEER's services for the PROJECT.

7.2.2 In addition, ENGINEER will be responsible to CITY for damages caused by its negligent conduct during its activities at the PROJECT site or in the field.

7.3 Estimates and Projections

Estimates and projections prepared by ENGINEER relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating results are based on ENGINEER's experience, qualifications and judgment as a design professional. Since ENGINEER has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractor's procedures and methods, unavoidable delays, construction contractor's methods of determining prices, economic conditions, competitive bidding or market conditions and other factors affecting such estimates or projections, ENGINEER does not guarantee that actual rates, costs, performance, schedules, etc., will not vary from estimates and projections prepared by ENGINEER.

7.4 On-Site Services

PROJECT site visits by ENGINEER during construction shall not make ENGINEER responsible for construction means, methods, techniques, sequences or procedures; for construction safety precautions or programs; or for any construction contractor(s') failure to perform its work in accordance with the plans and specifications.

7.5 Changes

CITY shall have the right to make changes within the general scope of ENGINEER's services, with an appropriate change in compensation, upon execution of a mutually acceptable amendment or change order signed by an authorized representative of the CITY and the President or any Vice President of the ENGINEER.

7.6 Suspension of Services

Should CITY fail to fulfill its responsibilities as provided under Section 4 to the extent that ENGINEER is unduly hindered in his services or if CITY fails to make any payment to ENGINEER on account of its services and expenses within ninety (90) days after receipt of ENGINEER's bill therefor, ENGINEER may, after giving seven (7) days' written notice to CITY, suspend services under this Agreement until CITY has satisfied his obligations under this Agreement.

SUSPENSION OR TERMINATION OF AGREEMENT

- A. The Local Agency may, without being in breach hereof, suspend or terminate the Engineer's services under this Agreement, or any part of them, for cause or for the convenience of the Local Agency, upon giving to the Engineer at least fifteen (15) days' prior written notice of the effective date thereof. The Engineer shall not accelerate performance of services during the fifteen (15) day period without the express written request of the Local Agency.
- B. Should the Agreement be suspended or terminated for the convenience of the Local Agency, the Local Agency will pay to the Engineer its costs as set forth in Attachment B including actual hours expended prior to such suspension or termination and direct costs as defined in this Agreement for services performed by the Engineer, a proportional amount of the fixed fee based upon an estimated percentage of Agreement completion, plus reasonable costs incurred by the Engineer in suspending or terminating the services. The payment will make no other allowances for damages or anticipated fees or profits. In the event of a suspension of the services, the Engineer's compensation and schedule for performance of services hereunder shall be equitably adjusted upon resumption of performance of the services.
- C. The Engineer shall remain liable to the Local Agency for any claims or damages occasioned by any failure, default, or negligent errors and/or omission in carrying out the provisions of this Agreement during its life, including those giving rise to a termination for non-performance or breach by Engineer. This liability shall survive and shall not be waived, or estopped by final payment under this Agreement.
- D. Upon the occurrence of any of the following events, the Engineer may suspend performance hereunder by giving the Local Agency 30 days advance written notice and may continue such suspension until the condition is satisfactorily

remedied by the Local Agency. In the event the condition is not remedied within 120 days of the Engineer's original notice, the Engineer may terminate this agreement.

1. Receipt of written notice from the Local Agency that funds are no longer available to continue performance.
2. The Local Agency's persistent failure to make payment to the Engineer in a timely manner.
3. Any material contract breach by the Local Agency.

7.7.1 In the event of CITY's termination of the Agreement pursuant to the above section, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared under this Agreement, shall at the option of the CITY become its property.

Further, the ENGINEER shall not be relieved of any liability to the CITY for any damages sustained by the CITY by virtue of any breach of this Agreement by ENGINEER and the CITY may withhold any payments due the ENGINEER for the purpose of set-off until such time as the exact amount of damages to the CITY, if any, is determined.

7.7.2 COVENANT AGAINST CONTINGENT FEES

The Engineer warrants that he has not employed or retained any company or person, other than a bona fide employee working for the Engineer, to solicit or secure this agreement, and that he has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, the Local Agency shall have the right to annul this agreement without liability, or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee, plus reasonable attorney's fees.

7.8 Publications

Recognizing the importance of professional development on the part of ENGINEER's employees and the importance of ENGINEER's public relations, ENGINEER may prepare publications, such as technical papers, articles for periodicals, and press releases, pertaining to ENGINEER's services for the PROJECT. Such publications will be provided to CITY in draft form for CITY's advance review. CITY will review such drafts promptly and will provide comments to ENGINEER. CITY may require deletion of proprietary data or confidential information from such publications but otherwise will not unreasonably withhold its approval. The cost of ENGINEER's activities pertaining to any such publication shall be paid entirely by ENGINEER.

7.9 Nondiscrimination

During the performance of this Agreement, ENGINEER agrees to the following:

7.9.1. ENGINEER shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, handicap, or national origin. ENGINEER shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, age, handicap, or national origin. 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. ENGINEER agrees to post notices in conspicuous places, available to employees and applicants for employment.

7.9.2 NONDISCRIMINATION

The Engineer, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the ground of race, color or national origin in the selection and retention of subcontractors. The Engineer will comply with Title VII of the Civil Rights Act of 1964, as amended. More specifically, the Engineer will comply with the regulations of the Department of Transportation relative to nondiscrimination in federally assisted programs of the Department of Transportation, as contained in 49 CFR 21 through Appendix H and 23 CFR 710.405 which are herein incorporated by reference and made a part of this contract. In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the Engineer's obligations under this contract and the regulations relative to non-discrimination on the ground of color, race or national origin.

7.9.3 ENGINEER shall, in all solicitation or advertisements for employees placed by or on behalf of ENGINEER, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, handicap, or national origin.

7.9.4 ENGINEER shall comply with all provisions of State and Federal Laws governing the regulation of Equal Employment Opportunity including Title VI of the Civil Rights Act of 1964.

7.10 Successor and Assigns

CITY and ENGINEER each binds himself and his successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement; except as above, neither CITY nor ENGINEER shall assign, sublet or transfer his interest in the Agreement without the written consent of the other.

7.11 Rights and Benefits

ENGINEER's services will be performed solely for the benefit of the CITY and not for the benefit of any other persons or entities.

7.12 Compliance with Local Laws

ENGINEER shall comply with all applicable laws, ordinances and codes of the state and city.

7.13 Law; Submission to Jurisdiction Governing.

This Contract shall be governed by, interpreted and enforced in accordance with the laws of the State of Missouri and/or the laws of the United States, as applicable. The venue for all litigation arising out of, or relating to this Contract Document, shall be Boone County, Missouri or the United States Western District of Missouri. The parties hereto irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of Missouri and waive any defense of forum non conveniens

7.14 Employment of Unauthorized Aliens Prohibited

7.14.1 ENGINEER agrees to comply with Missouri State Statute section 285.530 in that they shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

7.14.2 As a condition for the award of this contract ENGINEER shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. ENGINEER shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

7.14.3 ENGINEER shall require each subcontractor to affirmatively state in its contract with ENGINEER that the subcontractor shall not knowingly employ, hire for employment or continue to employ an unauthorized alien to perform work within the state of Missouri. ENGINEER shall also require each subcontractor to provide ENGINEER with a sworn affidavit under the penalty of perjury attesting to the fact that the subcontractor's employees are lawfully present in the United States.

7.15 LOBBY CERTIFICATION

CERTIFICATION ON LOBBYING: Since federal funds are being used for this agreement, the Engineer's signature on this agreement constitutes the execution of all certifications on lobbying which are required by 49 C.F.R. Part 20 including Appendix A and B to Part 20. Engineer agrees to abide by all certification or disclosure requirements in 49 C.F.R. Part 20 which are incorporated herein by reference.

7.16 No Waiver of Immunities

In no event shall the language of this Agreement constitute or be construed as a waiver or limitation for either party's rights or defenses with regard to each party's applicable sovereign, governmental, or official immunities and protections as provided by federal and state constitutions or laws.

7.17 Entire Agreement

This Agreement represents the entire and integrated Agreement between ENGINEER and CITY relative to the Scope of Services herein. All previous or contemporaneous agreements, representations, promises and conditions relating to ENGINEER's services described herein are superseded.

7.18 ATTACHMENTS

The following exhibits are attached hereto and are hereby made part of this contract:

Attachment A – Scope of Service

Attachment B - Estimate of Cost

Attachment C – DBE Contract Provisions

Attachment D – Fig. 136.4.15 Conflict of Interest Disclosure Form

[SIGNATURES ON FOLLOWING PAGE]

CITY OF COLUMBIA, MISSOURI

By: _____
Mike Matthes, City Manager

ATTESTED BY:

Sheela Amin, City Clerk

APPROVED AS TO FORM:

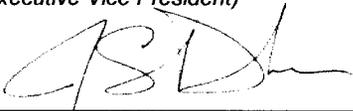
Nancy Thompson, City Counselor

CERTIFICATION: I hereby certify that the above expenditure is within the purpose of the appropriation to which it is charged, Account No. _____, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

Director of Finance

ENGINEER

By: _____
James F. Hoving, PE
(Executive Vice President)

By: 

Jason S. Dohrmann, PE
(Regional Director / Transportation)

NOTICE TO VENDORS
Section 285.525 – 285.550 RSMo Effective January 1, 2009

Effective January 1, 2009 and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

As a condition for the award of any contract or grant in excess of five thousand dollars by the state or by any political subdivision of the state to a business entity, or for any business entity receiving a state administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. [RSMO 285.530 (2)]

An employer may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 1 of this section. [RSMO 285.530 (4)]

For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is an example of this type of program. Information regarding E-Verify is available at:
http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm.

**ATTACHMENT A
SCOPE OF SERVICES**

ATTACHMENT A SCOPE OF SERVICES

SCOPE OF ENGINEERING SERVICES

Whenever the phrases or words "CITY" or "City of Columbia" appear in this document, both the word and the phrase shall be construed signifying the "City of Columbia" acting through the Board of Aldermen and in conjunction and working with the Missouri Department of Transportation (MoDOT). This applies mainly to deliverables and review times as specified within.

In order to achieve the above project goals and objective, the CONSULTANT will provide:

I. PROJECT MANAGEMENT

- a. Periodic Client Progress Meetings will be anticipated for the approximate duration of the project (total of 8 meetings anticipated). It is anticipated that all meetings will be held at the CITY offices. Progress meetings will be scheduled for 3 hours in duration to allow for travel and meeting minutes will be prepared and distributed to all attendees. Meetings will be slated so that they do not occur prior to, during, or directly after the week invoices are distributed, as progress reports will accompany the invoices. One (1) of the eight (8) anticipated meetings will be the project kick-off meeting and at least two (2) of the meetings will be used as meetings to discuss specific direction of landscaping and streetscape-theme concepts.
- b. Internal team meetings will be held as needed to ensure each team member (prime and subconsultant team members alike) are operating under the same directions and following the same guidance for the project. Meetings will last approximately one hour and will be held at HR Green's office. When applicable, meeting minutes will be prepared and shared with the CITY. Four (4) meetings are assumed for this task.
- c. Invoices and progress reports will be prepared monthly for the duration of the project (assume 16 months). The invoices will be prepared by the CONSULTANT in accordance with the standard MoDOT Consultant Invoice as referenced and found in the Engineering Policy Guide (EPG). Subconsultants will prepare individual invoices for their work and submit the invoices to HR Green, who will summarize all the invoices into one comprehensive invoice.
- d. Subconsultant Services: Subconsultants will be used for specific parts of the contract where CONSULTANT does not have staff or where niche expertise is warranted. This includes surveying, geotechnical investigations, structural assistance, quality control, and landscape/aesthetics. Subconsultant scopes of service are provided along with a breakdown of fees for each Subconsultant, but for ease of understanding, the corresponding Subconsultant line items in the fee estimate are entered only as a single direct cost. CONSULTANT has hours shown in the fee estimate to coordinate with the Subconsultants with respect to scope, schedule and budget, as well as to process invoices.
- e. Quality Control Plan – CONSULTANT will establish review and checking procedures for the project deliverables. This includes designated responsibility for implementation of the Plan. Quality Assurance (or the process of executing the established Quality Control procedures) will be included in each individual task items and will be completed at appropriate points in time for that specific task. However, for major deliverables that require assembling data from many different tasks or delivery teams, an additional review will be completed both internally and [externally by EFK Moen](#). It is anticipated that these reviews will be completed prior to submittal of the following deliverables:
 - 1) Preliminary Plans
 - 2) Right of Way Plans
 - 3) Final PS&E

II. PRELIMINARY DESIGN

Based on preliminary discussions with the CITY, the CONSULTANT will provide Preliminary Plans that are approximately 30% complete. These plans will show the general nature of the proposed improvements and will include the following:

- a. Field Checks – the CONSULTANT will complete the following field checks of the project to evaluate existing conditions:
 - 1) Topographic Surveys
 - i. The CONSULTANT will independently verify any aspect of the Topographic Survey or its component parts, as CONSULTANT deems necessary.
 - ii. The CITY has provided an existing survey that they have requested the CONSULTANT use. It is understood that the CITY has made an effort to anticipate CONSULTANT's needs regarding the Topographic Survey. CONSULTANT shall be responsible to independently acquire any topographic information missing from the Project Topographic Survey.
 - iii. The CONSULTANT will tie the existing and proposed project stationing to MoDOT's stationing along both Old 63 and Stadium Blvd.
 - 2) See PGAV scope of services for additional items.
- b. Cover sheet with legend, sheet index, locator map, and abbreviations.
- c. Proposed typical sections.
- d. Reference tie sheet depicting adopted and set control for the project. Each reference point shall be three-point tied to existing features located outside proposed construction limits.
- e. Split plan and profile sheets drawn to a scale of 1" equals 20' horizontally and 1" equals 5' vertically. Design of horizontal and vertical alignment shall be sufficient to provide construction limits and cross sections.
 - 1) Approximate construction limits and easement / new right of way lines will be shown on the plan/profile sheets and will be based on the approximate construction limits.
 - 2) The location of all utilities, and book and page if the easement is on private property, based on available information.
- f. Cross sections for mainline and side roads will be shown at fifty-foot intervals along the proposed centerlines of the alignment, drawn at a scale of 1" equals 5' both horizontally and vertically. Driveway sections will also be shown at the preliminary plan stage.
- g. A preliminary analysis of stormwater drainage impacts will be completed during the Preliminary Design Phase. A preliminary stormwater drainage layout will be designed and shown on plan sheets. A technical memorandum will be completed summarizing this task. In addition, the following will occur:
 - 1) Hydraulic Study – Sizing of Structure - The CONSULTANT will perform a hydraulic analysis of the existing box culvert crossing Stadium, to identify the drainage area, available storage and bioretention opportunities, possible solutions, and cost at the NE quadrant of the Stadium/Old 63 intersection.
 - i. The deliverable will be a Technical Memorandum that explains the design alternatives and associated costs. Through phone calls and emails, the expectation will be that a preferred alternative will be selected to carry into Preliminary Design.
 - 2) Structural Conceptual Alternative Evaluation - Conceptual box culvert layouts and analysis will be completed to determine if the existing culvert at the southern end of the project limits that carries flow under Old 63 will require lengthening. From this work, order of magnitude cost opinions will be developed.
 - i. The deliverable will be a Technical Memorandum that explains the design alternatives and associated costs. Through phone calls and emails, the expectation will be that a preferred alternative will be selected to carry into Preliminary Design.
- h. Preliminary Landscape Sheets – See PGAV scope of services for details.

- i. Prepare Engineer's Estimate of Probable Cost (EEOPC) – the CONSULTANT will, based on the preliminary plans, complete a preliminary engineer's estimate of probable cost utilizing recent bids in Columbia and the surrounding areas, supplemented by MoDOT's Estimate program.
- j. Environmental Documentation
 - 1) State Historic Preservation. CONSULTANT will prepare a Section 106 Project Information Form and submit it to the Missouri Department of Natural Resources to document and obtain concurrence that no historic properties will be affected by the project.
 - 2) NEPA. The CITY has received a Categorical CE for this project. No time or dollars have been allocated to this task.
- k. Utility Coordination – CONSULTANT will coordinate utility company activities for the project.
 - 1) The CONSULTANT will attend one (1) Utility Coordination Meeting at the onset of the project to introduce the project to the utility companies, and get it on their radar. The intent will be to try and combine this meeting with another Progress or Kick-off meeting to minimize travel costs. The understanding is that the CONSULTANT will facilitate and run this meeting.
 - i. For this meeting, the CONSULTANT will use the aerial / CAD map presented to the CITY during the interview process as a basis to talk from. Additional information will be the map prepared previously by the CITY used in the Cost Share Application.
 - 2) The CONSULTANT will attend another Utility Coordination Meeting after the preliminary design submittal has occurred to discuss existing facilities, their avoidance by the CONSULTANT during on-going design, and possible relocation corridors for impacted facilities. The understanding is that the CONSULTANT will facilitate and run this meeting.
 - i. For this Utility Coordination Meeting, the CONSULTANT will provide a preliminary plan submittal to utility providers, including an electronic (PDF) set of plans with the following sheets, if applicable: cover sheet, typical section sheets, plan sheets, and cross section sheets. Upon request, CAD copies of the plans can be made available to the utilities for their use.
- l. Public Involvement
 - 1) One (1) Open House (Public Meeting) will be held to present the preliminary plans to the affected stakeholders, elected City officials, and other interested parties.
 - i. One (1) CONSULTANT employees shall be on hand at the public meeting to assist with presentations and answer stakeholder questions.
 - ii. The CONSULTANT will provide two (2) copies of the stripmap of the proposed design, similar to that used during the interview process. The stripmaps should be mounted on display boards and will be on a high gloss paper. In addition, the CONSULTANT should also prepare two (2) copies of the rendered intersection that was also used in the interview process, and mount each on glossy display boards.
 - 2) One (1) Public Hearing will be held to present the project and preliminary plans to the Council for approval.
 - i. This meeting will include one (1) representative from the CONSULTANT presenting the project to the Council during an open meeting, and taking and answering questions from the public and Council.
 - ii. PDF copies of the plans to date, along with a Powerpoint presentation of the project will be expected of the CONSULTANT. The CITY will make copies of the plans to distribute to the Council Members prior to this meeting.
- m. Drainage Design – In order for an accurate and complete picture of the right of way needs for the project, the drainage design will be expedited and taken to a point where a submittal to the CITY can be made. This submittal will occur once the Preliminary Plans have been approved by the CITY and MoDOT, and after the public meeting has occurred. The drainage design will include separate items from the previous drainage assessments identified in Section II.g. As a part of this task, the CONSULTANT will:

- 1) Make an assessment of the existing and proposed watershed and drainage areas.
- 2) Make an assessment of the existing storm sewer drainage network (condition, location, capacity, etc.) to determine the extent it can be reused.
- 3) Identify the type, size, and location of the necessary drainage features for the project, including enclosed drainage features (inlets and pipes).
- 4) Propose water quality measures for evaluation for the overall site, as well as at each storm outfall, where applicable.
- 5) Prepare a Technical Memorandum submitted to the CITY for approvals.

III. RIGHT OF WAY DESIGN

After review of the preliminary plan comments from the public meeting and from the CITY's review, the CONSULTANT will modify the plans to correspond to any CITY driven changes and proceed towards final design of the project. At this point, the CONSULTANT will begin the preparation of Right of Way Plans.

The CONSULTANT shall provide the CITY all necessary documentation to request an A-Date in accordance to most current version of the Missouri Department of Transportation (MoDOT) standard LPA Manual.

For this project, all property takings and easement acquisition will be completed by the CITY, using the Right of Way Plans prepared by the CONSULTANT as follows:

- a. The CONSULTANT shall prepare Right of Way Plans, which may be separate drawings from those used for design and construction details. The Right of Way Plans shall show alignment, geometric design, removal of improvements, drainage facilities, property lines and ownership, other land survey information, street lines and existing right of way and existing easements. The CONSULTANT should also include any plan details, which will require additional right of way or easements during the construction phase of the project such as temporary pavement, temporary erosion control, etc. Right of Way Plans include title sheet, typical sections, split plan and profile sheets, and cross sections of the roadway, entrances, and side roads. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner may be shown in tabular form on the respective sheets.
- b. The Right of Way Plans shall be at the same scale as the construction plans. The Right of Way Plans shall include any design details that will control the width of right of way and necessary easements.
 - 1) New Right of Way lines and all new easements shall be dimensioned by bearings and distances. Centerline station and offset shall be shown on Right of Way and/or proposed easement locations throughout the project.
 - 2) The following minimum design features shall be included on the Right of Way Plans:
 - i. Title sheet with the appropriate project limits, access note and traffic data completed.
 - ii. Typical sections
 - iii. Cross sections at 50' intervals, including additional sections at each entrance with new and existing entrance grades.
 - iv. Construction limits (slope lines); drainage facilities; entrances and their reference location, width and type; property owners, with areas of new right of way, easements and remaining property; centerline bearing, ties to legal land corners from centerline stations; existing utility locations and easements, including replacement utility easements; horizontal curvature information; and proper right of way symbolization for new right of way and easements, including areas which may be required to accommodate temporary erosion control.
 - v. Township, Range, Section and/or U.S. Survey.
- c. The CITY shall review and approve the Right of Way Plans as completed by the CONSULTANT.

- d. The CONSULTANT shall be responsible for making all reasonable revisions to the right of way and construction plans due to negotiations with the property owners in an effort to acquire the right of way.

In addition to the specific Right of Way Plans requirements, the following items and assumptions are also included in this phase of work:

- e. Utility Coordination – The CONSULTANT will provide a right of way phase submittal to utility providers. This will include a PDF of the plans (which will include title sheet, typical section sheets, plan sheets, and cross section sheets). Upon request, AutoCAD copies of the plans will be made available to the utilities for their use. The CONSULTANT shall also maintain a utility coordination log of events and communications.
- f. The CONSULTANT shall provide individual Exhibits for each parcel requiring a temporary or permanent taking, and individual legal descriptions by parcel to accompany any exhibits required for temporary or permanent takings. The total number of exhibits shall be limited to six (6) for this contract. The total number of legal descriptions written shall be limited to six (6) for this contract. Both the Exhibits and the legal descriptions will be signed and sealed by a Missouri Licensed Professional Land Surveyor as required by law.
- g. All work under this phase will be completed under the direction and control of a Missouri Licensed Professional Land Surveyor. Two (2) seals will appear on the Right of Way Plans:
 - 1) Professional Land Surveyor will seal the Right of Way Plans certifying the proposed right of way, temporary easement, and permanent easement line work, dimensioning, and calculations.
 - 2) Professional Engineer will seal the Right of Way Plans certifying the proposed design for which the takings pertain to.
- h. Any work required for condemnation of property, once the Right of Way Plans have been submitted and approved, is excluded from this scope of services.
- i. The CONSULTANT will NOT provide title insurance information, prepare right of way appraisals or secure the necessary right of way by negotiation or condemnation for construction of this project.
- j. The CONSULTANT will NOT provide any staking or re-staking of tentative right of way on individual properties that may be required during the R/W negotiation or condemnation process.
- k. The CONSULTANT will NOT be responsible for the physical monumentation of any proposed right of way or property corners, or the re-establishment of existing corners which may have been damaged, removed, or not found for this project, once construction begins.

IV. FINAL DESIGN

The Final Plans, Specifications, and Estimate (PS&E) submittal in accordance with the current version of MoDOT's EPG and will specifically include the following information:

- a. Cover sheet with legend, sheet index, locator map, and abbreviations.
- b. Tabulation of Quantities – Quantity sheets (Summary "A-Sheet" and "2B-Sheet(s) with subsequent quantity breakdown with per item/per sheet/per stage quantities will be provided)
- c. Proposed typical sections
- d. Reference tie sheet depicting adopted and set control for the project. Each reference point shall be three-point tied to existing features located outside proposed construction limits. Reference points should be located approximately five hundred feet (500') apart.
- e. Split plan and profile sheets drawn to a scale of 1" equals 20' horizontally and 1" equals 5' vertically for both mainline and intersection sideroad streets.
- f. Intersection geometrics and warping details will be provided as needed at mutually agreeable scale.

- g. Traffic Signal, traffic component detail sheets, and Traffic Signal interconnect details drawn at a scale as needed. The following assumptions are made regarding this work:
 - 1) This work assumes the cabinet will be moved and relocated out of the existing location within the intersection island, and assumes hours for wiring and conduit to be replaced.
 - 2) This work assumes that this work will meet MoDOT requirements and will follow MoDOT standard signal drawings.
 - 3) It is assumed that MoDOT will complete the programming required to change timing and phasing inside the cabinet. No hours are allotted for this work.
 - 4) Interconnection – the work includes the modification of existing hardwire interconnection (not fiber optic) to the next signal to the west at Ashland Road, if necessary, due to the intersection improvements at Old 63. This scope does not include the design of new interconnection if currently not provided.
 - 5) ITS – It is assumed that the signal plans will not include ITS improvements such as existing or new fiber optic cable, network connections /communication plans or CCTV cameras.
 - 6) Detection – It is assumed that new stopbar detection will be specified as Optional Traffic Signal Detection in accordance with MoDOT requirements. It is assumed that advanced detection will not be provided.
- h. Proposed profiles for storm sewer pipe to be drawn at a scale of 1" equals to 20' horizontally and 1" equals 5' vertically.
- i. Striping and Signage plans will be shown on a sheet drawn at a scale of 1" equal to 20'.
- j. Retaining wall design will be show on split plan and profile sheets drawn to a scale of 1" equals 20' horizontally and 1" equals 2' vertically.
 - 1) Retaining wall design will be limited to a profile of a modular block wall depicting existing ground line, proposed top and bottom of wall, and an approximate square footage of face area for quantity calculations. Any design of the straps (grid) behind the wall or connections to the wall face shall be performed by the CONTRACTOR or his assigned, and signed and sealed plans submitted as shop drawings for approval.
- k. Landscaping Plans: The CONSULTANT will finalize planting plans and detail drawings for new landscape areas and median plantings showing layout and specific plant species selections. In addition, CONSULTANT will finalize the any landscaping plans and details necessary for new water quality features that are incorporated within the landscaping areas or as part of the new intersection design. [See PGAV scope of services for additional details.](#)
- l. Structural Design Sheets: Two (2) sheets are being allocated for the design of a junction chamber at the northeast corner of the Stadium and Old 63 intersection, to tie the existing box culvert to the other two incoming drainage culverts. This structure will allow the "pit" area to then be filled in and used as a water quality feature / rain garden for overland sheet flow.
 - 1) This assumes that there will be no structural design required to address the existing box culvert under Old 63. If structural assessments made in the Preliminary Design Phase recommend changes, a supplemental agreement will be required for this work. [EFK Moen will provide additional CAD services and quality control checking – see their scope of services for additional details.](#)
- m. Utility Relocation: One (1) sheet is being allocated for the adjustment and relocation of CITY-owned utilities in conjunction with this project. Specifically at this time, this work includes the fire hydrant at the northeast corner of Stadium and Old 63. If additional utilities that were unknown at the time of scoping present themselves during the project, a supplemental agreement may be required to accommodate this work.
- n. Erosion control plans will be provided on a split plan/plan sheet drawn at a scale of 1" equal to 20' horizontally, and will include specific locations for silt fence, waddles, ditch checks, rock dams, and other erosion control measures.
- o. Temporary Traffic Control will be shown on split plan sheets drawn to a scale of 1" equals 20'. Temporary Traffic Control Plans will show required lane drops, detours,

temporary signals, required detour signage, etc. as necessary to meet the requirements of both MoDOT and the Manual on Uniform Traffic Control Devices (MUTCD).

- p. Earthwork quantities and cross sections for the mainline and side roads shall be provided at fifty-foot intervals along the proposed centerline of the alignment. Cross sections will be drawn at a scale of 1" equals 5' both horizontally and vertically. Driveway sections will be included in addition to the 50-foot interval cross sections. Driveway sections will be shown as they numerically appear and sufficient survey will be provided to design the driveway from the new roadway grade to the controlling house grade (for minimum impact conditions). For each cross section, right of way, easement, and utility information will be graphically shown.
- q. Prepare EEOPC – CONSULTANT will, based on the Final Design Plans, will complete an EEOPC (including right of way and utility costs within the estimate).

In addition to the specific PS&E requirements, the following items and assumptions are also included in this phase of work:

- r. Utility Coordination – The CITY will coordinate utility company activities for any adjustments required to be included in the final design plans. The CONSULTANT will make a Final PS&E (PDF) submittal to each utility company with facilities within the project corridor. Upon request, AutoCAD copies of the plans will be made available to the utilities for their use, if required.
 - 1) CONSULTANT will incorporate all necessary utility plan adjustments into the final plans as required by the CITY; however actual design of relocated or adjusted utility facilities (excluding storm sewers or water lines – see item IV.m. above) is NOT included within this scope of services.
 - 2) The CITY will be responsible for the preparation, negotiation and execution of all utility agreements as may be required to adjust existing utilities as a result of this project.
 - 3) The CONSULTANT will attend one (1) Utility Coordination Meeting in conjunction with the Final Design Plans.
- s. Missouri Department of Transportation Standard Specifications will be adopted for the specifications of this project and appended as needed in the Job Special Provisions. The CONSULTANT shall prepare all necessary Job Special Provisions (which supersede MoDOT's Standard Specifications) for review and approval by the CITY. The CITY will provide the front-end Contractual documents and the CONSULTANT shall advise the CITY of any needed changes to these documents to meet correlate with JSPs or meet Federal requirements. In addition, the CONSULTANT shall prepare and coordinate Public Interest Findings for request of proprietary items as requested by the CITY.

V. BIDDING SERVICES / CONSTRUCTION SERVICES

Bidding Services for this project will include:

- a. The CITY will assemble the bidding packages following the Federal Aid Boiler Plate (MoDOT EPG 136.9.3) for the project, and combine all required bidding information into a Bid Proposal. The CONSULTANT will only provide the Job Special Provisions and the Bid Item listing for incorporation.
- b. Issuing written clarifications in response to RFI's (in the form of addenda to the advertisement for bids)
- c. Attendance at the pre-construction meeting
- d. Shop drawing review for various items as required in the contract. Items include modular block retaining walls, drainage structures, traffic signal equipment, or irrigation/landscaping items only.
- e. Answer contractor questions during the bid phase and construction and make one (1) site visit when requested by the CITY, for special issues regarding plan conformance or plan interpretation.

VI. DELIVERABLES PROVIDED BY CONSULTANT

CONSULTANT will deliver or provide the labor and materials to assemble the following submittals:

- a. The services of all professionals and technical personnel required for the performance of the services described under the Scope of Services above.
- b. Preliminary Plans
 - 1) One (1) PDF set of Initial Preliminary Plans for review by the CITY and MoDOT.
 - 2) One (1) ½-size set of Preliminary Plans to the CITY for their records and a PDF set to MoDOT and the utility companies as the deliverable.
- c. Right of Way Plans
 - 1) One (1) PDF set of Right of Way Plans for review by the CITY and MoDOT.
 - 2) One (1) ½-size set of Right of Way Plans to the CITY for their records and a PDF set to MoDOT as the deliverable.
 - 3) One (1) PDF set and one (1) paper copy of the exhibits and legal descriptions for the project to the CITY.
- d. Final PS&E
 - 1) One (1) PDF set of Construction Plans for preliminary review by the CITY
 - 2) One (1) PDF set of Final Plans to the CITY, MoDOT, and the utility companies as the deliverable. In addition, one (1) electronic set of Job Special Provisions will be submitted to the CITY and MoDOT for preliminary review.
 - 3) One (1) PDF set of Final Plans to the CITY and MoDOT as the secondary final deliverable. In addition, one (1) electronic set of Job Special Provisions will be submitted to the CITY and MoDOT for final approval.
 - 4) One (1) FINAL PDF set of Construction Plans and Bid Proposal will be submitted to the CITY. It is assumed that the CITY will be responsible for preparing the copies for the bidding documents for both the plans and Bid Proposal.
 - 5) One (1) Compact Disk (CD) containing an electronic copy of the Plans in AutoCAD format and including one (1) copy of the Job Special Provisions in Microsoft Word format. The design will be completed in Microstation (using Geopak as the design software) and converted to AutoCAD for submittal to the utilities requesting electronic files.

VII. EXCLUSIONS TO THIS PROPOSAL

- a. Traffic signal design warrants for, or any other related traffic signal work is not included in this proposal. Traffic signal interconnect work is also excluded from this proposal.
- b. Right of way acquisition services other than those plans specifically outlined in this proposal
- c. Wetland Mitigation / Soil Mitigation Plan.
- d. Archeological / Historical / Cultural Exploration over and above the preparation and submittal of the initial Section 106 application identified in Section II.j.(1).
- e. Full size mylars at final submission.
- f. Attendance at the bid opening.
- g. Construction Phase services except as specifically described elsewhere in this document.
- h. Any fees required for approvals or permits.
- i. Retaining Wall design (other than that specified under Item IV.j.)
- j. Any work related to condemnation of specific parcels.
- k. GIS-related work or conversion of project construction documents thereto.
- l. Design for relocation of existing utilities other than the CITY's hydrant near BreakTime.
- m. FEMA Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR).
- n. Cast in Place concrete retaining wall design.

THE FOLLOWING ITEMS ARE ATTACHED:

- | | |
|----------------------------------|---------------------------|
| a. PGAV Scope and Fee | c. ES&S Scope and Fee |
| b. TSi Engineering Scope and Fee | d. EFK Moen Scope and Fee |

PGAV
SCOPE AND FEE

PGAV SCOPE OF SERVICES

Stadium / Old 63 Intersection Project

II. PRELIMINARY DESIGN PLAN PHASE

The SUBCONSULTANT will undertake the following tasks in the Preliminary Design Plans phase.

- a. Field Checks - The SUBCONSULTANT will complete a general field check of the project to evaluate existing topographic conditions and review the topographic survey.
- h. Preliminary Landscape Plans - Planting plans will be developed for new landscape areas including raised islands and storm water infiltration areas.
 - 1) The SUBCONSULTANT will develop a maximum of one elevation, and one section drawing per landscape area to illustrate landscaping effect on driver visibility. The SUBCONSULTANT may develop up to two elevation drawings for landscapes utilizing stormwater quality features.
 - 2) The SUBCONSULTANT will create plant palettes showing various recommended plant species (illustrating color, size, form, season of interest, and noteworthy characteristics.)
 - 3) The SUBCONSULTANT will develop conceptual irrigation plans with investigation into application type (drip, spray, etc.), watering schedules, maintenance, and schematic layout. Irrigation plans will be developed for the raised medians only.
 - 4) The SUBCONSULTANT will develop planting plans for stormwater quality features identified in the preliminary plans.
- i. Estimate of Probable Cost (EOPC) – the SUBCONSULTANT will, based on the preliminary plans, complete a preliminary estimate of probable cost for raised island and storm water quality landscaping.
- I. Public Involvement
 - i. Conceptual Streetscape Renderings – The SUBCONSULTANT will develop renderings of the proposed improvements for use at public meetings. These renderings will include perspective view illustrations for various locations in the project area. Perspective views may include aerial/birds-eye, street level, or combination perspective/section views. One perspective view has been completed as part of the RFQ selection process. Illustrations will be suitable for mounting on foam board full size (30" x 42"). A total of two (2) - 30" x 42" boards is assumed.

IV. FINAL DESIGN PHASE

After approval of the Preliminary Plans by MoDOT and the COMMISSION, the SUBCONSULTANT will, after being given notice from the CONSULTANT, begin the preparation of final design tasks of the project as follows.

- k. Final Landscape Plans

PGAV SCOPE OF SERVICES

Stadium / Old 63 Intersection Project

- 1) The SUBCONSULTANT will finalize planting plans and detail drawings for raised islands and storm water infiltration areas showing layout and specific plant species selections.
 - 2) The SUBCONSULTANT will prepare detail drawings for plant installation and maintenance as necessary.
 - 3) The SUBCONSULTANT will prepare Job Special Provisions for the landscape plans which will address materials and construction requirements not covered by the standard specifications.
 - 4) The SUBCONSULTANT will prepare irrigation area plans and Job Special Provisions landscaping areas identified as requiring irrigation. The irrigation area plans will be prepared for use by a design/build irrigation contractor. The selected design/build irrigation contractor will be responsible for any additional engineering or surveying which may be required for the construction of an irrigation system (pipe sizing, pressure calculations, etc.)
 - 5) The SUBCONSULTANT will prepare a tabulation of landscape quantities.
 - 6) The SUBCONSULTANT will prepare planting plans, details, and Job Special Provisions for the implementation of stormwater quality feature landscaping for the areas specified in the preliminary plan. The CONSULTANT will be responsible for any engineering which may be required for the construction of these stormwater quality features including soils, grading, drainage, etc.
- q. Estimate of Probable Cost (EOPC) - The SUBCONSULTANT will, based on the final design plans, complete an estimate of probable cost for all landscaping pay items.

VI. DELIVERABLE PROVIDED BY CONSULTANT

b. Preliminary Plans

- 1) The SUBCONSULTANT will submit the applicable preliminary design plans and an Estimate of Probable Cost (EOPC) as noted in Section II. h. of PGAV scope of services to the CONSULTANT for forwarding to the CITY.
- 2) Conceptual Streetscape Rendering Boards as noted in Section II. i. of PGAV scope of services.

d. Final PS&E

- 1) Submit 95% Draft Final Design Plans (PS&E) for Review - The SUBCONSULTANT will submit the applicable final design plans, quantity tabulations, and job special provision to the CONSULTANT for forwarding to the CITY.
- 2) Complete Final Revisions - The SUBCONSULTANT will complete revisions to the Draft Final PS&E in accordance with the review comments received from the COMMISSION. After revising the Draft Final PS&E, the SUBCONSULTANT will submit the Final PS&E to the CONSULTANT for forwarding to the CITY for bid letting.

PGAV SCOPE OF SERVICES

Stadium / Old 63 Intersection Project

- 3) Electronic copy of landscape plans in AutoCAD format and an electronic copy of landscape Job Special Provisions in Microsoft Word format.

VII. EXCLUSIONS TO THIS PROPOSAL

PGAV will not be responsible for the following:

- a. Attendance at project public meetings.
- b. Additional engineering or surveying which may be required for the construction of an irrigation system (pipe sizing, pressure calculations, etc.)
- c. Answering requests for information (RFI) or issuance of written clarifications in response to RFI's (in the form of addenda to the advertisement for bids) during the bidding phase.

**Estimated Fee / Cost Breakdown
Stadium Old 63 Intersection**

		PGAV FEE			TOTAL	
Task II: Preliminary Design		DTB	SER	ADMIN		
a	Field Checks		6		\$600	\$600
h	Preliminary Landscape Plans	5	35		\$4,050	\$4,050
i	Estimate of Probable Cost (EOPC)		6		\$600	\$600
l.1.ii	Conceptual Streetscape Renderings		25		\$2,500	\$2,500
SUBTOTALS		5	72	0	\$7,750	\$7,750
Task IV: Final Design		DTB	SER	ADMIN		
k	Final Landscape Plans	10	70		\$8,100	\$8,100
q	Estimate of Probable Cost (EOPC)		12		\$1,200	\$1,200
SUBTOTALS		10	82	0	\$9,300	\$9,300
Task VI: Deliverable Provided by Consultant		DTB	SER	ADMIN		
d.1	Submit 95% Draft Final Design Plans (PS&E) for Review		1		\$100	\$100
d.2	Complete Final Revisions		20		\$2,000	\$2,000
SUBTOTALS		0	21	0	\$2,100	\$2,100
TOTAL, ALL TASKS (Including Estimated Reimbursable Expenses)			154		\$19,150	\$19,150

TSi ENGINEERING, INC.

SCOPE AND FEE



September 16, 2014

Mr. Jason Dohrmann, P.E.

HR GREEN

16020 Swingley Ridge Road, Suite 205

St. Louis, MO 63017

**Re: Proposal for Geotechnical Investigation
Stadium and Old 63 Intersection Project
Columbia, Missouri
Proposal No. SLM14129.00 – Revision 1**

Dear Mr. Dohrmann:

TSi Engineering, Inc. (TSi) is pleased to submit this revised proposal to HR Green to perform a geotechnical investigation for the Stadium and Old 63 Intersection Project in Columbia, Missouri. Our understanding of the project is based on conversations with you regarding the project. It is also our understanding that MoDOT is providing some amount of funding for the project. Therefore, we have used MoDOT guidelines for the boring parameters including the number and depth of borings for the roadway and retaining wall.

This proposal supersedes our proposal from August 25th and includes updates based on our discussion last week.

PROJECT UNDERSTANDING

The project consists of the construction of approximately 750 feet of proposed mill and overlay of Old 63 south of East Stadium Boulevard. In addition, a new right turn lane will be constructed on the east side of East Stadium Boulevard. A retaining wall will be constructed at the northeast part of the interchange. It is anticipated to be a maximum of 5 feet high and was measured of the provided drawing to be approximately 140 feet long. The new roadway will be approximately at existing grade. No significant cuts or fills are anticipated. TSi understands the terrain along the roadway is relatively flat.

TSi will perform a geotechnical investigation for the project. The purpose of the geotechnical investigation will be to determine engineering characteristics of the soil underlying the proposed roadway, in order to provide geotechnical design and construction recommendations for the new roadway. These recommendations would include an evaluation of subgrade support characteristics and pavement drainage considerations.

Mr. Jason Dohrmann

HR GREEN

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SCOPE OF SERVICES

1. TSi proposes to complete the following scope of services: A boring will be completed approximately every 200 feet along the new road alignment. We propose to drill 4 borings for the roadway. Two of the borings will be drilled in the shoulder near the intersection for the turn lane (new roadway). The other two borings will be drilled through the pavement which will be used to evaluate the existing roadway. For purposes of this proposal, we have assumed that the existing pavement is 8 inches thick. We will core the pavement.
2. Each roadway boring will be drilled to a depth of 5 feet. At each boring location, Standard Penetration Test (ASTM D 1586) and Shelby Tube samples (ASTM D1587) will be recovered in the soil at 2.5 foot intervals.
3. Per MoDOT guidelines, two sample borings and one auger hole will be drilled for the retaining wall. The borings will be drilled to a depth of 15 feet. The two sample borings will have a minimum of two Shelby tubes obtained in each boring. The auger boring will not be sampled and is intended to observe if auger refusal is encountered at that location. (Therefore, the total number of borings drilled for the project will be 7 as shown on the attached proposed boring location plan.)
4. We will estimate the California Bearing Ratio based on index tests performed on boring samples. The cost for collecting bulk samples and laboratory testing is not included within this proposal.
5. The groundwater depth encountered during drilling will be recorded for each boring. The borings will be backfilled with auger cuttings and sand. Borings drilled through pavement will have cold patch placed at the ground surface.
6. A laboratory testing program will be completed for the samples recovered. The soil samples will be classified according to the Unified Soil Classification System (ASTM D2487). Each Shelby Tube sample will have classification, moisture content (ASTM D2216), unit weight, and unconfined compressive strength (ASTM D2166) tests performed; and the split spoon samples will have moisture content tests performed. Atterberg Limit tests (ASTM D4318) will be performed on selected soil samples from the borings.
7. TSi will obtain permission to drill in the roadway right-of-way. We have assumed that HR Green will obtain permission to drill in the Break Time Gas Station if the proposed structures (retaining wall and detention facility) are not within the right-of-way.
8. A geotechnical investigation report will be prepared for the project that will document the

Mr. Jason Dohrmann

HR GREEN

Page 3

course of the investigation, the field exploration and laboratory programs, and will present the boring logs, laboratory test data, and a description of the subsurface conditions encountered. The report will provide geotechnical recommendations for the design and construction of the new roadway and reconstruction of existing roadway, including the need for any subgrade improvement and drainage considerations.

SCHEDULE OF WORK PERFORMANCE

We anticipate that field work could begin within two weeks after receiving written authorization to proceed. It is anticipated that the field exploration for the project will take one to two days to complete. A written report of our findings will be issued within approximately four weeks after the completion of the field work. We will be happy to provide verbal information as data becomes available.

ESTIMATED COST

TSi's work will be performed on a time and material basis. Based on the proposed scope of work and assuming no unanticipated subsurface conditions are encountered, our fee for the project will be \$ 9,990. If site conditions are encountered during exploration that warrants additional services, we will notify you to discuss the necessary scope modification. However, the fee will not be exceeded without your prior authorization.

ASSUMPTIONS/CLARIFICATIONS

In preparing this scope of services and cost estimate, TSi has made the following assumptions:

1. HR Green will survey and stake the boring locations in the field and will coordinate with the property owner(s) for drilling access, prior to TSi's arrival at the project site to begin the investigation.
2. TSi will clear the utilities at the boring locations.
3. TSi will provide signage/traffic control per MoDOT guidelines to block a lane of traffic for one day to drill borings through the roadway.
4. The borings will be backfilled with auger cuttings and sand, if needed. Any excess auger cuttings will not be mounded over each boring, since the borings will be through pavement. Borings through pavement will be patched.
5. We have not included costs for standby time or delays to the drilling, and assume we will have unrestricted access in the project area to complete our work.
6. We have not included the cost for any site restoration, such as filling in tire ruts; however we

Mr. Jason Dohrmann

HR GREEN

Page 4

will take reasonable precautions to minimize any damage resulting from the drilling activities.

7. TSi has assumed that all sites are free of environmental concerns. If suspect odors or other evidence of contamination or hazardous materials are encountered, then drilling will be terminated per OSHA regulations, and suspended until appropriate health and safety protocol are developed by a qualified environmental specialist retained by HR Green. The costs for any delays, for environmental consultation, or for implementation of the consultant's recommendations are not within the proposed scope or fees.

If contamination is suspected in a given boring, then that boring will be terminated when the possible contamination is observed. If drilling was to proceed, then any soil brought to the surface would need to be containerized (generally in 55-gallon drums) and have environmental tests performed. The containers would need to remain on site until the environmental testing was completed. Then the drums could be disposed of as non-impacted waste, special waste, or as hazardous waste depending on the type and volume of constituents involved. In addition, equipment in contact with the suspected contamination would need to be cleaned on site with the contact material being collected. Since our intent is to terminate the boring if contamination is suspected, we have not included fees for these items. The observation of possible contamination in any given boring would not affect the drilling of any of the other borings.

LIMITATIONS

TSi will perform only those services described herein. HR Green and TSi may subsequently agree in writing to provide additional services under this agreement for additional compensation. Services provided by TSi will be consistent with the engineering standards prevailing at the time and in the area that the work is performed. No other warranty, expressed or implied, is intended. Soil samples will be disposed of 60 days after submittal of the study report unless other arrangements are requested by HR Green.

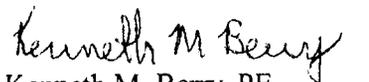
Mr. Jason Dohrmann

HR GREEN

Page 5

If this proposal is acceptable to you please sign in the space provided below and return one copy to us along with HR Green's Agreement for Subconsultant Services. We appreciate the opportunity to be of continued service to HR Green. Please feel free to call us if you have any questions, or if you wish to discuss the proposal in greater detail.

Respectfully submitted,
TSI ENGINEERING, INC.


Kenneth M. Berry, PE
Vice President of Engineering


Denise B. Hervey, PE
Principal

Attachments: Proposed Boring Location Plan
Fee Estimate

Accepted by:

Printed Name

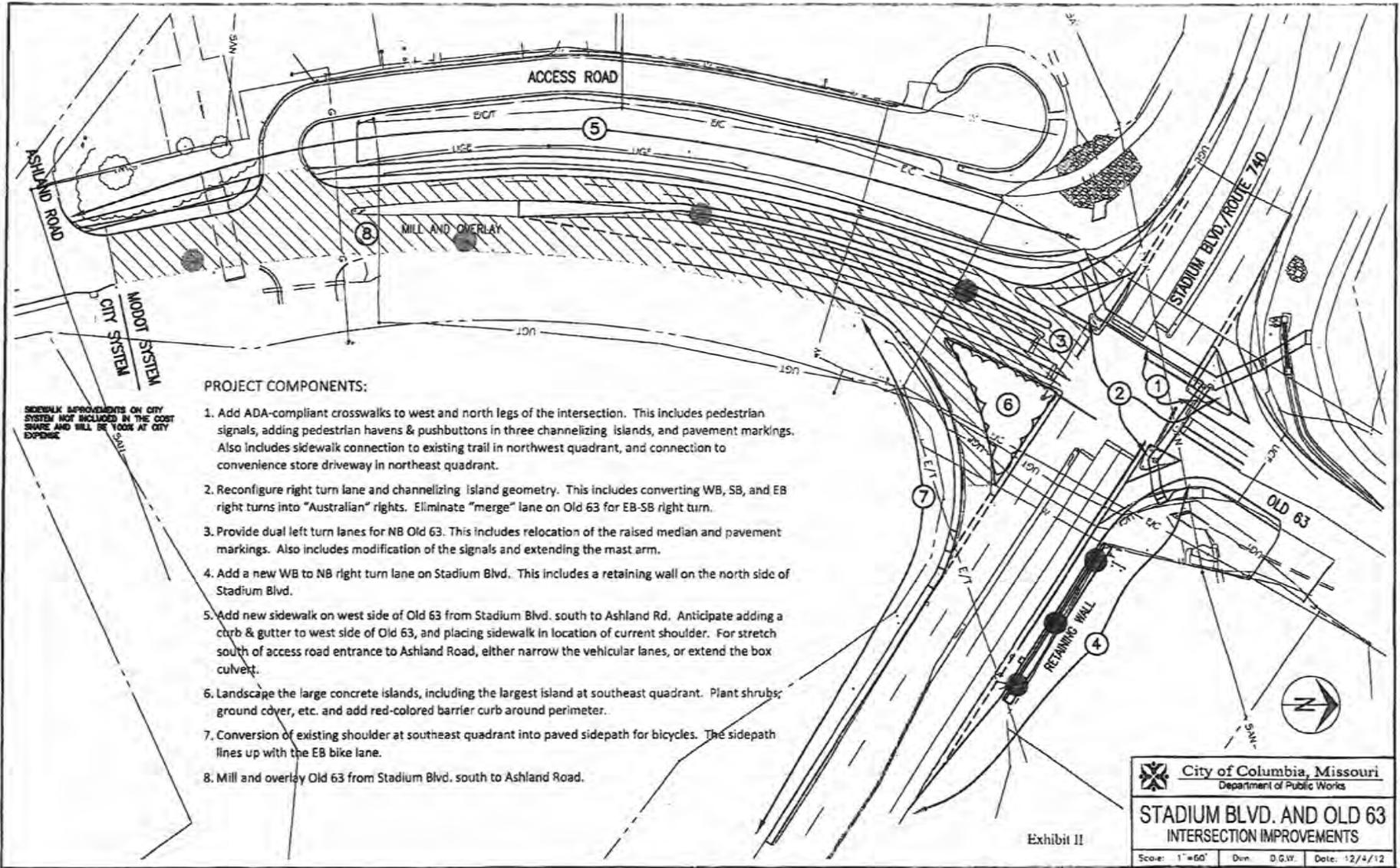
Date

Signature

Date

Note: The contents of this proposal are confidential and shall not be distributed to any person(s) other than those for whom this proposal was intended.

PROPOSED BORING LOCATIONS (DENOTED BY ●)



SIDEWALK IMPROVEMENTS ON CITY SYSTEM NOT INCLUDED IN THE COST SHARE AND WILL BE 100% AT CITY EXPENSE

PROJECT COMPONENTS:

1. Add ADA-compliant crosswalks to west and north legs of the intersection. This includes pedestrian signals, adding pedestrian havens & pushbuttons in three channelizing islands, and pavement markings. Also includes sidewalk connection to existing trail in northwest quadrant, and connection to convenience store driveway in northeast quadrant.
2. Reconfigure right turn lane and channelizing island geometry. This includes converting WB, SB, and EB right turns into "Australian" rights. Eliminate "merge" lane on Old 63 for EB-SB right turn.
3. Provide dual left turn lanes for NB Old 63. This includes relocation of the raised median and pavement markings. Also includes modification of the signals and extending the mast arm.
4. Add a new WB to NB right turn lane on Stadium Blvd. This includes a retaining wall on the north side of Stadium Blvd.
5. Add new sidewalk on west side of Old 63 from Stadium Blvd. south to Ashland Rd. Anticipate adding a curb & gutter to west side of Old 63, and placing sidewalk in location of current shoulder. For stretch south of access road entrance to Ashland Road, either narrow the vehicular lanes, or extend the box culvert.
6. Landscape the large concrete islands, including the largest island at southeast quadrant. Plant shrubs; ground cover, etc. and add red-colored barrier curb around perimeter.
7. Conversion of existing shoulder at southeast quadrant into paved sidepath for bicycles. The sidepath lines up with the EB bike lane.
8. Mill and overlay Old 63 from Stadium Blvd. south to Ashland Road.


City of Columbia, Missouri
 Department of Public Works
STADIUM BLVD. AND OLD 63
INTERSECTION IMPROVEMENTS
 Scale: 1"=60' Draw: D.G.W. Date: 12/4/12

Exhibit II

Geotechnical Study Cost Estimate 2014

Proposal No.: SLM14129 Date: 9/16/2014 p. 1 of 2
 Project Name: Stadium Blvd Improvements By: KMB
 No. Borings: 7 Borings Total, 4 roadway borings to 5', 3 retaining wall borings to 15 ft (one unsampled)

PLANNING START UP	Principal	Grp. Mgr.	Engr. VI	Engr. II	Eng I/Tech	Clerical	Fee
		1					\$0.00

FIELD INVESTIGATION

Engineering

Meetings - Scope, Various		2					
Review Info and Utilities				2	2		
Next day (perc test reading and backfill)							
Drilling Supervision Observation				2	10		
Milcage 260 @ 0.56						Subtotal	\$145.60

Unit Drilling Prices

Drill Rig and Crew, Detailed estimate on Sheet 2							\$2,768.00
City Permit (Verify Cost) @ \$150.00 each							\$0.00
MoDNR Piezo Permit @ \$135.00 each							\$0.00
Piezo/Well protector @ \$168.00 each for stick up							\$0.00
Piezo Well protector @ \$300.00 each for flush mount							\$0.00
Per Diem 1 @ \$120.00 per day							\$120.00
Safety Cones and Signage @ \$200.00 per day							\$0.00
Traffic Control : Per MoDOT 1 @ \$1,050.00 day							\$1,050.00
						Subtotal Drill + Markup 0%	\$3,938.00

LABORATORY TESTING

Supervision

				4			
Classification @ \$5.00							\$0.00
Moisture Content 16 @ \$4.50							\$72.00
Penetrometer @ \$4.00							\$0.00
Extrusion 6 @ \$15.00							\$90.00
Unit Weight 6 @ \$25.00							\$150.00
Unconfined Compression 6 @ \$55.00							\$330.00
Atterberg Limits 6 @ \$70.00							\$420.00
Sieve (no hydrometer) @ \$70.00							\$0.00
UU Triaxial @ \$110.00							\$0.00
Hydrometer @ \$70.00							\$0.00
Rock - Unconfined Compr. @ \$65.00							\$0.00
Proctor and CBR @ \$560.00							\$0.00
						Subtotal Lab	\$1,062.00

ANALYSIS AND REPORT PREPARATION

Report Documents

Vicinity Map					1		
Site and Boring Location Plan					1	1	
Boring Logs		0.5		1	2		
Subsurface Profiles (gINT)							
Tables - Pavement Core							

Analysis

Foundations				1			
Settlement							
Lpile Parameters							
Lateral Earth Pressures		0.5		2			
Construction Considerations			1	2			
Retaining Wall Considerations			1	2			
Other - Pavement				2			

Report Preparation

Manhours		1	2	4		2	
----------	--	---	---	---	--	---	--

GEOTECHNICAL STUDY TOTAL

Manhour Total	0	4.5	4.5	23	16	2	
Hourly Fee	\$65.00	\$66.50	\$58.00	\$29.00	\$25.00	\$15.00	
Labor Fee	\$0.00	\$299.25	\$261.00	\$667.00	\$400.00	\$30.00	
					Subtotal Eng. Cost		\$1,657.25
				Labor _ Overhead @	FAR	1.5658	\$2,594.92
				Profit @		14%	\$595.30
					PROJECT TOTAL:		\$9,993.08

ENGINEERING SURVEYS & SERVICES

SCOPE AND FEE

Engineering Surveys and Services

Consulting Engineers, Scientists, and Land Surveyors
Analytical and Materials Laboratories

1113 Fay Street
Columbia, Missouri 65201
Telephone 573-449-2646
Facsimile 573-499-1499

August 27, 2014

E-Mail ess@ESS-Inc.com
<http://www.ESS-Inc.com>

Mr. Jason Dohrmann, P.E.
HR. Green, Inc.
16020 Swingley Ridge Road
Suite 205
Chesterfield, MO 63017

RE: City of Columbia
Stadium & Old 63
Intersection Improvements
Proposal

Dear Mr. Dohrmann:

At your request we have estimated the work involved to prepare a boundary, topographic and utility survey of the Stadium Boulevard and Old 63 intersection, as shown on the enclosed sketch. We propose to provide the following for the above referenced project:

1. Establish a minimum of four horizontal control points based on Missouri State Plane Coordinate System of 1983.
2. Establish a minimum of three bench marks based on NAVD 1988.
3. Verify and incorporate the boundary and topographic survey prepared by the City of Columbia.
4. Survey areas not show by City of Columbia survey.
5. Survey utilities which can be located by the Missouri One Call locate system and available records.
6. Acquire up-to-date title information from Boone Central Title Company for two parcels of land.

We will complete this work for a cost not to exceed \$18,000. Final billing will be from the enclosed fee schedule, based on the actual time involved, but not to exceed the agreed maximum.

We are ready to begin work on this project immediately upon receiving the notice to proceed.

Please contact me if you have any questions.

Thank you very much.

Respectfully,



Frederick E. Carroz, III

enclosures

**CITY OF COLUMBIA - STADIUM & OLD 63
INTERSECTION IMPROVEMENTS PROJECT**

E Stadium Blvd & Old 63 S, Columbia, MO 65201

SURVEY LIMITS

**ENGINEERING SURVEYS AND SERVICES
AUGUST 27, 2014**

Engineering Surveys and Services

Consulting Engineers, Scientists, and Land Surveyors
Analytical and Materials Laboratories

1113 Fay Street
Columbia, Missouri 65201
Telephone 573-449-2646
Facsimile 573-499-1499

E-Mail ess@ESS-Inc.com
<http://www.ESS-Inc.com>

HOURLY FEE SCHEDULE

January 1, 2014

<u>Services of:</u>	<u>Rate:</u>
Firm Principal	\$120-160 /hour
Registered Professional Engineer	\$ 110-140 /hour
Registered Professional Land Surveyor	\$ 100-130 /hour
Project Surveyor	\$ 70-90 /hour
Engineer In Training	\$ 80-100 /hour
Senior Engineering Technician	\$ 60-70 /hour
Engineering Technician	\$ 50-60 /hour
CAD Operator	\$ 65-90 /hour
Chemist	\$ 70-80 /hour
Administrative Assistant	\$ 50-55 /hour
Computer	\$ 50 /day
EDM Equipment	\$ 100 /day
Global Positioning System Equipment	\$ 200 /day
Drill Rig	\$ 150-\$250 /hour
Large Format Copies	\$ 3.50-\$ 5.50 each
Photocopies	\$ 0.20 each
Travel	\$ 0.60/mile

NOTES

1. Since charges are based on salary multiplier, all rates are subject to minor fluctuations as salaries change.
2. Overtime charges at 1.4 times above rates.

Other Offices
Jefferson City, Missouri • Sedalia, Missouri



Memorandum

To: Fred Carroz, PLS
Engineering Surveys and Services

From: Jason Dohrmann, PE
HR Green, Inc.

Date: September 18, 2014

RE: Stadium / Old 63 Intersection Improvements
Surveying Scope of Services

The following is a scope of work related to the above project that HR Green would like you to provide a cost estimate on:

1.0 Project:

The survey limits for this project are defined generally by the corridor shown in the exhibit. More specifically, the following better describe the areas labeled on the exhibit:

1. Topo should only provide enough detail to allow the design of sidewalks/trail connections along the west side of Old 63 between Ashland Road and just north of Stadium. This includes picking up the ADA ramps and existing trails, as well as any other information between the lines shown. The survey should be dense enough to produce cross sections at a 25-foot interval.
2. Topo should generally follow the limits as shown on the exhibit and pick up existing features from the centerline of Old 63 for at least 100-feet perpendicular to the centerline in both directions for the areas shown, and more liberally in the area near the existing culvert and near the intersection. The survey in this area should be dense enough to produce cross sections at a 25-foot interval.

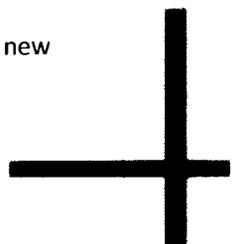
Topographic and boundary information has been provided by the City of Columbia for use in this project. The expectation of the scope of services provided by your firm will be to:

1. Confirm the survey and boundary information provided meets the requirements of work set forth in this document, both in coverage and in level of detail;
2. Verify the survey is accurate;
3. If either of the two previous items are not met, provide additional coverage or shots necessary to meet these requirements; and
4. Take ownership of the boundary survey, signing and sealing that the work performed meets the minimum standards set forth by the State of Missouri for Licensed Land Surveyors.

2.0 Survey Requirements:

A. General:

- a. The approximate area of coverage for each project is as described in the above section which is shown on the attached site plans.
- b. Previous surveys performed in this area should not be used or combined with the new topographic survey w/o prior approval from HR Green.

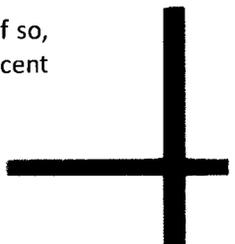




Memorandum

(Cont'd)

- c. The Surveyor of record shall be a Registered Land Surveyor registered in the State of Missouri.
 - d. Horizontal and vertical control shall be Missouri State Plane Coordinate System of 1983, Central Zone.
 - e. The Surveyor shall perform all field work necessary to accurately determine the property line and existing physical conditions of the areas, set monument markers, establish benchmarks and ascertain and record on a "topo" map and boundary survey drawing the information and data as specified in this document.
- B. Right of Way / Boundary Survey:
- a. Property research for each parcel along the alignment, including property owner name, assessor's map number, deed book and page, and size of parcel (in square feet and acres) obtained from the Boone County courthouse (or GIS system online).
 - b. Show and locate all existing easements of record for the property either from the record plat or recited in the landowner's conveyance deed. Surveyor will not be responsible for providing a title search for all affected properties; only easements showing up on subdivision plat will be shown on properties. If additional right of way is required for a parcel, the subsequent title insurance / report and the labor required to append the property stripmap will be considered extra work and subject to a supplemental agreement.
 - c. Locate all existing property corners.
 - d. CAD file (Microstation V8i format) with property line work and other information as described in the above item in the State Plane coordinate system.
 - e. All property lines shall have a bearing (to the nearest second) and a length (to the nearest hundredth of a foot) shown and the parcel shall close within acceptable tolerances governed by the State of Missouri. Any parcel bordering the proposed alignment will need bearings and distances on each line of that property as required by Boone County for exhibit preparation
 - f. At the request of MoDOT, prepare a boundary survey of the remaining MoDOT Right of Way in a drawing suitable for recording. This will require the ordering of two (2) title commitments for adjacent parcels to confirm current property ownership and easements within.
- C. Topographic Survey:
- a. Trees: Indicate the location, size and species of trees over 3 in. in trunk diameter and wooded areas where trees of smaller diameter are in profusion. Locate perimeter only of thickly wooded areas or scrub brush. Landscaping shall also be included (shrubs, bushes, mulched planting beds).
 - b. Provide benchmarks used (Benchmark to be adopted) or control points set, and any reference datum required for the project in an electronic file suitable for use in the plans. Control points shall be three-point tied to existing monuments outside of the proposed construction limits of the project and spaced no more than five hundred (500') feet apart. Also provided in the electronic file shall be a description of the coordinate system / zone used, geographic reference station used, coordinate values held for azimuth and direction, the grid factor, and the origin point for scaling. If possible, benchmarks from projects currently in design or construction within the yellow corridor shall be referenced and adopted.
 - c. Building Line: Note whether or not an "official building line" has been established and if so, its location with respect to streets and property lines. Indicate location, if any, of adjacent building lines.

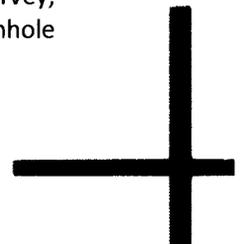




Memorandum

(Cont'd)

- d. Streets, Alleys and Parking Lots: The following data shall be indicated on the Survey. Drawings for all roads or lots adjacent to the site:
 - i. Name and /or route number.
 - ii. Direction of traffic.
 - iii. Distance between curbs.
 - iv. Type, dimension and condition of paving, where no paving exists, so note.
 - v. Location and dimension of existing paving striping, if any.
 - vi. Elevations along center lines at twenty-five foot (25') intervals and intersections.
 - vii. Edge of pavement and type of pavement.
 - viii. Spot elevation on paved parking lots at a grid interval of 25'± and at any obvious ridge points, low points and parking lot depressions.
 - ix. Driveway pavement, type and jointing.
 - x. Raised islands (and type).
 - xi. Street signs.
 - xii. Mailboxes.
 - xiii. Traffic signal bases, posts and pull boxes.
 - xiv. Subdivision monuments.
 - xv. Right of way markers.
- e. Sidewalks, Curbs and Gutters: The following data shall be indicated for all sidewalks, curbs, and gutters on or adjacent to the site (where no sidewalks, or curbs or gutters exist, the fact shall be noted):
 - i. Whether it is curb only, or curb and gutter.
 - ii. Elevations of sidewalks along the edge nearest to the site at twenty-five foot (25') intervals, at corners, at points of curvature and points of slope change.
 - iii. Elevations of tops of curbs and flow lines of gutters at twenty-five foot (25') intervals, at corners, at points of curvature and points off slope change.
 - iv. Edges of sidewalk and sidewalk type.
 - v. Sidewalk widths and elevations.
 - vi. Curb ramps including truncated domes and landing areas at top of ramps.
 - vii. Crosswalk markings and tinted / patterned pavement treatment at crosswalks.
- f. Utilities: The following information pertaining to utilities at the site shall be shown and noted on the Survey Drawing:
 - i. Electric & Telephone: Location of available electric and telephone service. Location of electric and telephone lines, poles and manholes. Location of street lights, traffic signal equipment and utility boxes.
 - ii. Water: Location of water mains, hydrants, valves and manholes. Indicate size of water mains.
 - iii. Gas: Location and size of gas mains including type, pressure, and source of gas supply.
 - iv. Sewers: Location, size, direction of flow, rate of fall, and type of material of sanitary, storm or combined sewer mains. Indicate whether public or private and whether the use is exclusively for sanitary waste or storm drainage. Indicate elevations of structure top, flow line, location of manholes and elevations of all "in" and "out" inverts. Indicate dimensions of existing storm drain out fall protection (riprap). When a sanitary, storm, or combined sewer manhole falls within the limits of survey, the inverts and top elevation of the next downstream and/or upstream manhole "outside" the limits of the survey shall also be obtained.





Memorandum

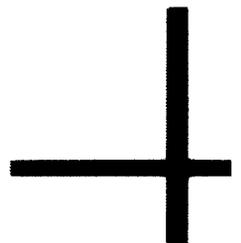
(Cont'd)

- v. Irrigation Systems: Location or sprinkler heads, control boxes and backflow preventers.
- g. Elevations and Contour Lines: Elevations of the site shall be taken on a grid suitable to the topography and size of the site and shall include elevations twenty-five feet (25') outside of the property boundary or as indicated.
 - i. Contour lines shall be drawn at intervals that accurately reflect the existing topography of the site but in no case more than one foot (1') intervals unless otherwise approved by HR Green.
 - ii. Spot elevations shall be provided specifically in areas to clearly define the site topography (e.g. at swales, ridges, valleys, etc.). Spot elevations shall be to the nearest .01 foot.
 - iii. Elevations shall be marked on contour lines at regular intervals.
 - iv. Where concrete or grassed ditches exist, spot elevations shall be provided at 50 feet intervals. At a minimum, the low point and approximate top of slope of the swale shall be included at each interval.
 - v. All ridges or valleys or any other breaklines necessary for an accurate Digital Terrain Model (DTM) of the project, and all other pertinent existing features which may affect the proposed design

D. Deliverables:

- a. The Survey Drawing(s) shall contain a signed certification by the surveyor that the survey of the described property was made under its supervision and that the data shown thereon is true and correct.
- b. The Survey Drawing shall be prepared in a format compatible with Bentley Microstation V8i. Survey features shall be placed on separate layers per CAD standards set by the Missouri Department of Transportation (MoDOT). The layering system shall to make easily manageable to turn layers on and off in drawings.
- c. The Survey Drawing shall be prepared at a scale of not less than 1" = 40', except when authorized otherwise by HR Green.
- d. The Drawing(s) shall be of such material (bond) and shall be so delineated that will assure quality reproduction of easily readable prints. The Surveyor shall submit three (3) hard copies of the Drawings.
- e. The following electronic files on a CD (or by email):
 - i. Separate files containing the topographic survey, right of way survey and digital terrain model information for the project in Microstation format.
 - ii. The digital terrain model file shall contain the information (e.g. 3D elements, tags, breaklines, random points, etc.) necessary to generate a digital terrain model (DTM). The file shall also contain the surface triangles used by the surveyor to produce the contours shown on the drawings. This DTM data shall be provided on separate layers in the Microstation file.
 - iii. Electronic file containing reference ties, benchmarks, control points, etc. as described above.
 - iv. ASCII file containing points for project.
- f. Paper copies of all deeds and maps obtained for use for the project.
- g. Copies of the pages in the field book pertaining to the job (benchmark/level loop calculations, reference tie drawings, etc.).

3.0 Survey Exhibit Follows:



EFK MOEN, INC.

SCOPE AND FEE



Memorandum

To: Darrell Eilers
EFK Moen, LLC

From: Jason Dohrmann, PE
HR Green, Inc.

Date: September 16, 2014

RE: Stadium / Old 63 Intersection Improvements
Intent of EFK Moen Scope of Services

The following is a scope of work related to the above project that HR Green would like you to provide, as well as the dollars we discussed verbally:

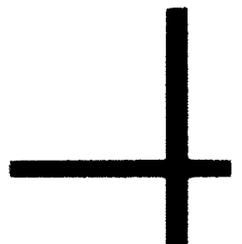
I. PROJECT MANAGEMENT

- e. Quality Control Plan – CONSULTANT will establish review and checking procedures for the project deliverables. This includes designated responsibility for implementation of the Plan. Quality Assurance (or the process of executing the established Quality Control procedures) will be included in each individual task items and will be completed at appropriate points in time for that specific task. However, for major deliverables that require assembling data from many different tasks or delivery teams, an additional review will be completed both internally and externally by EFK Moen. It is anticipated that these reviews will be completed prior to submittal of the following deliverables:
 - 1) Preliminary Plans (\$1,200 budget)
 - 2) Right of Way Plans (\$1,200 budget)
 - 3) Final PS&E (\$1,200 budget)

IV. FINAL DESIGN

- I. Structural Design Sheets: Two (2) sheets are being allocated for the design of a junction chamber at the northeast corner of the Stadium and Old 63 intersection, to tie the existing box culvert to the other two incoming drainage culverts. This structure will allow the "pit" area to then be filled in and used as a water quality feature / rain garden for overland sheet flow.
 - (1) EFK Moen will provide additional CAD services and quality control checking to assist HR Green in the completion of this task. The budget for this task is limited to \$4,700.

The total budget allocated for your firm to accomplish this scope of work shall not exceed \$8,300.00



**ATTACHMENT B
ESTIMATE OF COST**

ATTACHMENT B - ESTIMATE OF COST

PROJECT: Stadium / Old 65 Intersection Improvements PROJECT NO.: MOOR 263339 CLIENT: City of Columbia, MO CLIENT P.M.: Cliff Jarvis, PE - Engineering Supervisor CONSULTANT P.M.: Jason Bohmann, PE						HR GREEN, INC.														
						4	197	73	414	319	35									
						85	50	59	35	24	21	0.56								
						300	9600	4007	14480	10744	726	800.00								
						EXPENSES														
Task	DESCRIPTION OF TASK	HR GREEN Direct Labor Task SubTotal	Direct Labor Plus Overhead	Labor Plus Overhead Plus Profit	Total Expenses	Task Total	PRINL	PROF. (PM)	SENIOR PROF.	JUNIOR PROF.	SENIOR TECH.	ADMN. ASST.	Mileage Auto		Copies		Printing, Mailing, etc. Total	Subs Direct Total	Notes	
													Unit	Total	Number	Unit Price				Total
I PROJECT MANAGEMENT																				
a	External client progress meetings - 8 meetings assumed	1,620.00	4,493.88	5,123.02	400.00	5,523.02														
b	Internal team progress meetings - 4 meetings assumed	476.00	1,320.42	1,506.28		1,506.28														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
c	Invoices and program reports (assume 18 months)	568.00	1,575.83	1,798.23		1,798.23														
d.1	Subcontractor Services - Surveying Services (See attached estimate)	400.00	1,109.60	1,264.94	18,000.00	19,264.94														
d.2	Subcontractor Services - Geotechnical Services (See attached estimate)	400.00	1,109.60	1,264.94	9,960.00	11,264.94														Engineering Surveys & Services
d.3	Subcontractor Services - Landscaping and Aesthetics (See attached estimate)	1,300.00	3,326.80	3,794.83	18,150.00	22,944.83														TS Engineering
e.1	CA/QC Preliminary Plan Submittal	160.00	443.84	505.98	1,200.00	1,706.98														PG&V
e.2	CA/QC Right of Way Plan Submittal	80.00	221.92	252.99	1,200.00	1,452.99														EPK Moen Milestone Quality Check
e.3	CA/QC Final P&E Plan Submittal	80.00	221.92	252.99	1,200.00	1,452.99														EPK Moen Milestone Quality Check
II PRELIMINARY DESIGN																				
a	Field check of top survey and address any issues (incl. add'l survey)	200.00	554.80	632.47	60.00	692.47														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
b	Prepare title sheet (1 sheet)	68.00	181.41	218.20		218.20														
c	Prepare typical sections (2 sheets)	137.00	380.04	433.24		433.24														
d	Prepare control pt. benchmarks, and geom. sheet (1 sheet)	103.00	285.72	326.72		326.72														
e	Prepare plan/profile sheets (4 sheets)	1,748.00	4,848.95	5,627.81		5,627.81														
f	Prepare cross sections for mainline and sidewalks (16 sheets)	1,204.00	3,339.90	3,807.48		3,807.48														
g.1	Conceptual analysis and tech memo - Culvert under Stadium	1,304.00	3,617.30	4,123.72		4,123.72														
g.2	Conceptual design and tech memo - Culvert under Old 65	1,304.00	3,617.30	4,123.72		4,123.72														
h	Prepare Landscape Plans and rendering (PG&V)																			Already included in PG&V numbers above
i	Engineers Estimate of Probable Construction Cost - Prelim. Plans	482.00	1,281.59	1,461.01		1,461.01														
j	Environmental documentation - Section 106 permit	282.00	782.27	891.79		891.79														
k.1	Attend utility coordination kickoff meeting and prepare minutes	221.00	613.05	698.88		698.88														
k.2	Attend Preliminary Design utility coordination meeting and prepare minutes	221.00	613.05	698.88	60.00	748.88														
l.1	Pub. involvement - prepare for attend. and staff public open house meeting	1,130.00	3,134.63	3,673.47	60.00	3,823.47														Try to combine with another meeting - no rental car
l.2	Pub. involvement - prepare for attend. and staff public open house hearing	568.00	1,575.83	1,798.23	60.00	1,848.23														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
m.1	Assess watershed and drainage areas	306.00	871.44	851.45		851.45														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
m.2	Assess existing storm sewers	479.00	1,326.75	1,514.77		1,514.77														
m.3	Type, size and location of proposed drainage features	748.00	2,074.95	2,365.45		2,365.45														
m.4	Proposed water quality measures	896.00	2,762.90	3,148.71		3,148.71														
m.5	Drainage report developed and submitted to CITY for approval	1,412.00	3,916.99	4,485.25		4,485.25														
	Make Preliminary Plan Submittal to City and MoDOT	105.00	291.27	332.05		332.05														
III RIGHT OF WAY DESIGN																				
a	Separate ROW sheets from Prel. Plans / sheet set up	103.00	285.72	326.72		326.72														
b.1	Modify cover sheet (1 sheet)	34.00	94.32	107.52		107.52														
b.2	Modify typical sections (2 sheets)	68.00	189.63	215.04		215.04														
b.3	Modify plan/profile sheets - annotate with bearings/distances (4 sheets)	1,164.00	3,226.94	3,680.99		3,680.99														
b.4	Modify cross sections for mainline (16 sheets)	272.00	754.83	860.16		860.16														
d	ROW Plan and Exhibit revisions based on ownership changes, negotiations, etc.	960.00	2,663.04	3,036.87		3,036.87														
e	Attend utility coordination meeting and prepare minutes	200.00	554.80	632.47	60.00	692.47														
f.1	Preparation of individual exhibits by ROW or assessment (limited to 8 exhibits)	795.00	2,205.33	2,514.09		2,514.09														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
f.2	Prepare notes and sounds descriptions (limited to 8 descriptions)	857.00	2,488.28	2,836.64		2,836.64														
	Make ROW Plan Submittal to City and MoDOT	105.00	291.27	332.05		332.05														
IV FINAL DESIGN																				
a	Modify cover sheet (1 sheet)	34.00	94.32	107.52		107.52														
b	Tabulate quantities and prepare 2A and 2B sheets (3 sheets)	1,032.00	2,862.77	3,263.56		3,263.56														
c	Modify typical sections (2 sheets)	34.00	94.32	107.52		107.52														
d	Modify control pt. benchmarks, and geom. sheet (1 sheet)	68.00	189.63	215.04		215.04														
e	Modify plan/profile sheets (4 sheets)	1,024.00	2,846.58	3,236.26		3,236.26														
f	Prepare intersection signals / geometrics sheets (1 sheet)	402.00	1,089.95	1,250.74		1,250.74														
g	Create traffic signal / add signal and quantity sheets (4 sheets)	5,288.00	14,688.91	16,722.58		16,722.58														
h	Create pipe profile sheets (1 sheet)	670.00	1,868.58	2,119.78		2,119.78														Assumes we are Relocating Signal Cabinet, modifying signal equipment and having to splice conduit, reroute power, etc.
i	Prepare striping and signage plans (2 sheets)	462.00	1,281.59	1,461.01		1,461.01														
j	Retaining wall plans (1 sheet)	486.00	1,292.68	1,473.66		1,473.66														
k	Modify Landscape Plans (PG&V)																			Already included in PG&V numbers above
l	Structural design plans (2 sheets)	1,232.00	3,417.87	3,896.03	4,700.00	8,696.03														4,700.00
m	Utility relocation plans (1 sheet)	850.00	2,435.30	3,004.24		3,004.24														EPK Moen Subconsultant GC and Structural Assistance
n	Prepare erosion control sheet (1 sheet)	274.00	760.08	866.49		866.49														
o	Prepare TTCIP / Staging sheets (4 sheets)	1,782.00	4,943.27	5,636.33		5,636.33														
p	Modify x-sections / compute RW for mainline and sidewalks (16 sheets)	754.00	2,091.60	2,384.42		2,384.42														
q	Update EEOPC for final quantities / cost indexing	190.00	527.06	600.86		600.86														
r	Attend final utility coordination meeting and prepare minutes	182.00	502.81	572.17	60.00	632.17														
s	Prepare P&E, P&E, Bidder Documents, and other required 3TP paperwork	1,408.00	3,908.78	4,452.80		4,452.80														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
	Make Final P&E Submittal to City and MoDOT	105.00	291.27	332.05		332.05														
V BIDDING SERVICES / CONSTRUCTION SERVICES																				
a	Assemble Bid Proposal and combine with Federal Bidder Plans contract	100.00	277.40	318.24		318.24														
b	Issuing written clarifications to requests for information during bidding phase	282.00	782.27	891.79		891.79														
c	Attend preconstruction conference	150.00	416.10	474.36	60.00	534.36														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
d	Perform shop drawing reviews	716.00	1,986.18	2,264.25		2,264.25														
e	Periodic site visits during construction and answering contractor questions	150.00	416.10	474.36	60.00	534.36														Rental Car: Cheaper to rent car at \$50/day than to charge mileage
TOTAL						184,144.81														

**ATTACHMENT B
ESTIMATE OF COST**

<u>TASK I - PROJECT MANAGEMENT</u>	<u>Rate</u>	<u>Hours</u>	<u>Cost</u>
Principal	\$80.00	4	\$320.00
Professional	\$50.00	76	\$3,800.00
Senior Professional	\$59.00	0	\$0.00
Junior Professional	\$35.00	16	\$560.00
Senior Technician	\$34.00	4	\$136.00
Administrative Assistant	\$21.00	8	\$168.00
<u>TASK II - PRELIMINARY DESIGN</u>			
Principal	\$80.00	0	\$0.00
Professional	\$50.00	46	\$2,300.00
Senior Professional	\$59.00	19	\$1,121.00
Junior Professional	\$35.00	161	\$5,635.00
Senior Technician	\$34.00	105	\$3,570.00
Administrative Assistant	\$21.00	13	\$273.00
<u>TASK III - RIGHT OF WAY DESIGN</u>			
Principal	\$80.00	0	\$0.00
Professional	\$50.00	23	\$1,150.00
Senior Professional	\$59.00	6	\$354.00
Junior Professional	\$35.00	47	\$1,645.00
Senior Technician	\$34.00	42	\$1,428.00
Administrative Assistant	\$21.00	1	\$21.00
<u>TASK IV - FINAL DESIGN</u>			
Principal	\$80.00	0	\$0.00
Professional	\$50.00	38	\$1,900.00
Senior Professional	\$59.00	44	\$2,596.00
Junior Professional	\$35.00	178	\$6,230.00
Senior Technician	\$34.00	165	\$5,610.00
Administrative Assistant	\$21.00	11	\$231.00
<u>TASK V - BIDDING SERVICES / CONSTRUCTION SERVICES</u>			
Principal	\$80.00	0	\$0.00
Professional	\$50.00	14	\$700.00
Senior Professional	\$59.00	4	\$236.00
Junior Professional	\$35.00	12	\$420.00
Senior Technician	\$34.00	0	\$0.00
Administrative Assistant	\$21.00	2	\$42.00
HR Green LABOR SUBTOTAL		1039 hrs	\$40,446.00
<i>HR Green Payroll Overhead</i>	(Est. at 48.10% X Subtotal)		\$19,454.53
<i>HR Green General and Admin Overhead</i>	(Est. at 129.30% X Subtotal)		\$52,296.68
Total Labor and Overhead			\$112,197.20
<i>HR Green Fixed Fee</i>	(14% x Total Labor & Overhead)		\$15,707.61
HR Green TOTAL LABOR, OVERHEAD, & FIXED FEE			\$127,904.81
Other Direct Costs	Rental Car		800.00
	Subcontractors: TSi Engineering **		9,990.00
	Engineering Surveys & Services		18,000.00
	PGAV	(DBE ** percentage) 9.9%	19,150.00
	EFK Moen **		8,300.00
DIRECT COST AND SUBCONSULTANT SUBTOTAL			56,240.00
TOTAL FOR HR GREEN, INC.			\$184,144.81

ATTACHMENT C
DISADVANTAGE BUSINESS ENTERPRISE CONTRACT PROVISIONS

1. Policy: It is the policy of the U.S. Department of Transportation and the Local Agency that businesses owned by socially and economically disadvantaged individuals (DBE's) as defined in 49 C.F.R. Part 26 have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds. Thus, the requirements of 49 C.F.R. Part 26 and Section 1101(b) of the Transportation Equity Act for the 21st Century (TEA-21) apply to this Agreement.

2. Obligation of the Engineer to DBE's: The Engineer agrees to assure that DBEs have the maximum opportunity to participate in the performance of this Agreement and any subconsultant agreement financed in whole or in part with federal funds. In this regard the Engineer shall take all necessary and reasonable steps to assure that DBEs have the maximum opportunity to compete for and perform services. The Engineer shall not discriminate on the basis of race, color, religion, creed, disability, sex, age, or national origin in the performance of this Agreement or in the award of any subsequent subconsultant agreement.

3. Geographic Area for Solicitation of DBEs: The Engineer shall seek DBEs in the same geographic area in which the solicitation for other subconsultants is made. If the Engineer cannot meet the DBE goal using DBEs from that geographic area, the Engineer shall, as a part of the effort to meet the goal, expand the search to a reasonably wider geographic area.

4. Determination of Participation Toward Meeting the DBE Goal: DBE participation shall be counted toward meeting the goal as follows:

A. Once a firm is determined to be a certified DBE, the total dollar value of the subconsultant agreement awarded to that DBE is counted toward the DBE goal set forth above.

B. The Engineer may count toward the DBE goal a portion of the total dollar value of a subconsultant agreement with a joint venture eligible under the DBE standards, equal to the percentage of the ownership and control of the DBE partner in the joint venture.

C. The Engineer may count toward the DBE goal expenditures to DBEs who perform a commercially useful function in the completion of services required in this Agreement. A DBE is considered to perform a commercially useful function when the DBE is responsible for the execution of a distinct element of the services specified in the Agreement and the carrying out of those responsibilities by actually performing, managing and supervising the services involved and providing the desired product.

D. A Engineer may count toward the DBE goal its expenditures to DBE firms consisting of fees or commissions charged for providing a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of this Agreement, provided that the fee or commission is determined by MoDOT's External Civil Rights Division to be reasonable and not excessive as compared with

fees customarily allowed for similar services.

E. The Engineer is encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals.

5. Replacement of DBE Subconsultants: The Engineer shall make good faith efforts to replace a DBE Subconsultant, who is unable to perform satisfactorily, with another DBE Subconsultant. Replacement firms must be approved by MoDOT's External Civil Rights Division.

6. Verification of DBE Participation: Prior to final payment by the Local Agency, the Engineer shall file a list with the Local Agency showing the DBEs used and the services performed. The list shall show the actual dollar amount paid to each DBE that is applicable to the percentage participation established in this Agreement. Failure on the part of the Engineer to achieve the DBE participation specified in this Agreement may result in sanctions being imposed on the Commission for noncompliance with 49 C.F.R. Part 26 and/or Section 1101(b) of TEA-21. If the total DBE participation is less than the goal amount stated by the MoDOT's External Civil Rights Division, liquidated damages may be assessed to the Engineer.

Therefore, in order to liquidate such damages, the monetary difference between the amount of the DBE goal dollar amount and the amount actually paid to the DBEs for performing a commercially useful function will be deducted from the Engineer's payments as liquidated damages. If this Agreement is awarded with less than the goal amount stated above by MoDOT's External Civil Rights Division, that lesser amount shall become the goal amount and shall be used to determine liquidated damages. No such deduction will be made when, for reasons beyond the control of the Engineer, the DBE goal amount is not met.

7. Documentation of Good Faith Efforts to Meet the DBE Goal: The Agreement goal established by MoDOT's External Civil Rights Division. The Engineer must document the good faith efforts it made to achieve that DBE goal, if the agreed percentage specified is less than the percentage stated. Good faith efforts to meet this DBE goal amount may include such items as, but are not limited to, the following:

A. Attended a meeting scheduled by the Department to inform DBEs of contracting or consulting opportunities.

B. Advertised in general circulation trade association and socially and economically disadvantaged business directed media concerning DBE subcontracting opportunities.

C. Provided written notices to a reasonable number of specific DBEs that their interest in a subconsultant agreement is solicited in sufficient time to allow the DBEs to participate effectively.

D. Followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested in subconsulting work for this Agreement.

E. Selected portions of the services to be performed by DBEs in order to increase the likelihood of meeting the DBE goal (including, where appropriate, breaking down subconsultant agreements into economically feasible units to facilitate DBE participation).

F. Provided interested DBEs with adequate information about plans, specifications and requirements of this Agreement.

G. Negotiated in good faith with interested DBEs, and not rejecting DBEs as unqualified without sound reasons, based on a thorough investigation of their capabilities.

H. Made efforts to assist interested DBEs in obtaining any bonding, lines of credit or insurance required by the Commission or by the Engineer.

I. Made effective use of the services of available disadvantaged business organizations, minority contractors' groups, disadvantaged business assistance offices, and other organizations that provide assistance in the recruitment and placement of DBE firms.

8. Good Faith Efforts to Obtain DBE Participation: If the Engineer's agreed DBE goal amount as specified is less than the established DBE goal given, then the Engineer certifies that the following good faith efforts were taken by Engineer in an attempt to obtain the level of DBE participation set by MoDOT's External Civil Rights.

**ATTACHMENT D
FIG. 136.4.15
CONFLICT OF INTEREST DISCLOSURE FORM FOR LPA/CONSULTANTS**

Local Federal-aid Transportation Projects

Firm Name (Consultant): HR Green, Inc.

Project Owner (LPA): City of Columbia, MO

Project Name: Stadium Blvd. / Old 63 Intersection Improvements

Project Number: MoDOT J5S3092

As the LPA and/or consultant for the above local federal-aid transportation project, I have:

1. Reviewed the conflict of interest information found in Missouri's Local Public Agency Manual (EPG 136.4)
2. Reviewed the Conflict of Interest laws, including 23 CFR § 1.33, 49 CFR 18.36.

And, to the best of my knowledge, determined that, for myself, any owner, partner or employee, with my firm or any of my sub-consulting firms providing services for this project, including family members and personal interests of the above persons, there are:

No real or potential conflicts of interest
If no conflicts have been identified, complete and sign this form and submit to LPA

Real conflicts of interest or the potential for conflicts of interest
If a real or potential conflict has been identified, describe on an attached sheet the nature of the conflict, and provide a detailed description of Consultant's proposed mitigation measures (if possible). Complete and sign this form and send it, along with all attachments, to the appropriate MoDOT District Representative, along with the executed engineering services contract.

LPA

Consultant

Printed Name: _____

Printed Name: Jason S. Dohrmann, PE

Signature: _____

Signature:  _____

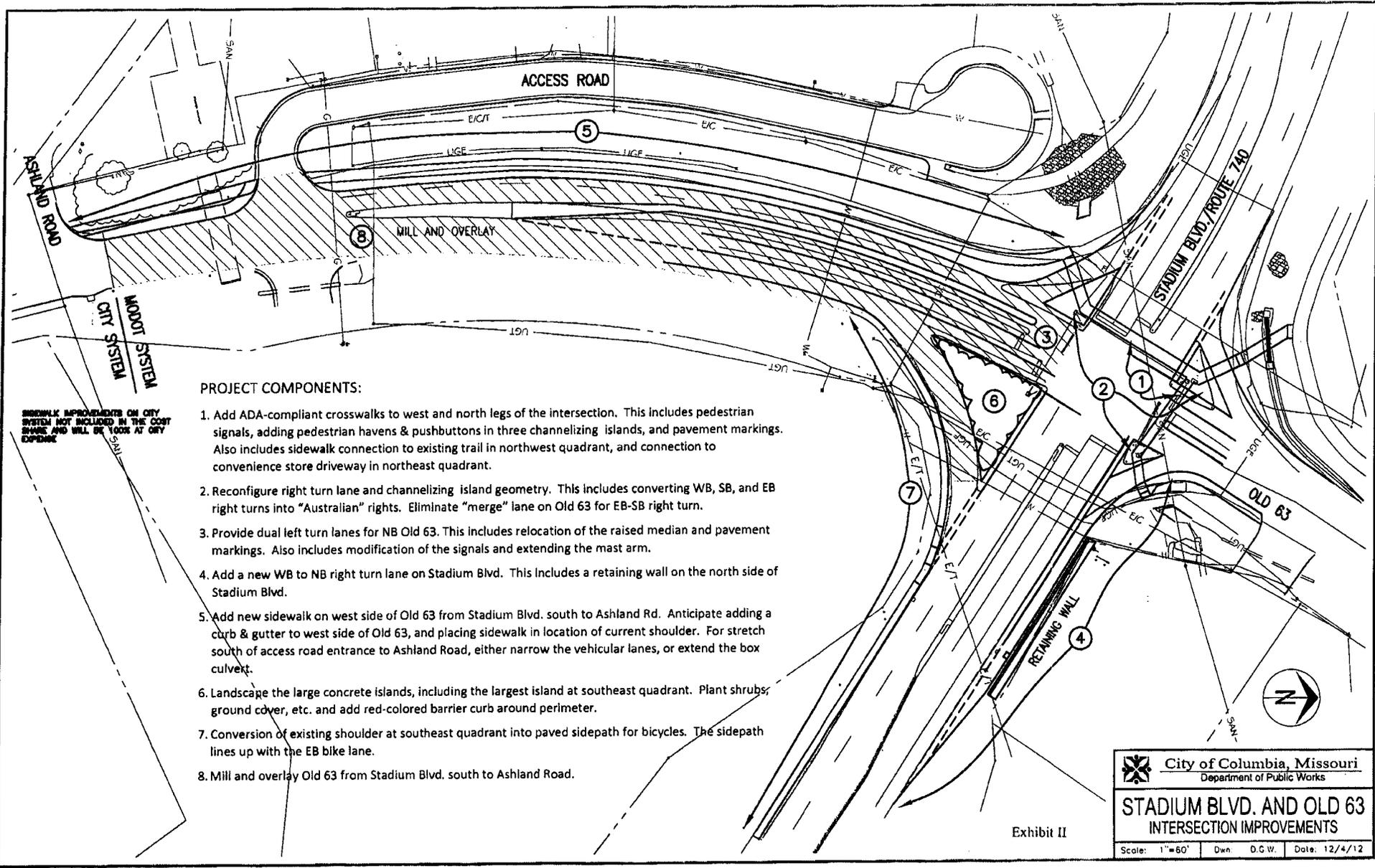
Date: _____

Date: September 23, 2014



SUPPORTING DOCUMENTS INCLUDED WITH THIS AGENDA ITEM ARE AS FOLLOWS:

Maps, Plats and Plans



SIDEWALK IMPROVEMENTS ON CITY SYSTEM NOT INCLUDED IN THE COST SHARE AND WILL BE DONE AT CITY EXPENSE

PROJECT COMPONENTS:

1. Add ADA-compliant crosswalks to west and north legs of the intersection. This includes pedestrian signals, adding pedestrian havens & pushbuttons in three channelizing islands, and pavement markings. Also includes sidewalk connection to existing trail in northwest quadrant, and connection to convenience store driveway in northeast quadrant.
2. Reconfigure right turn lane and channelizing island geometry. This includes converting WB, SB, and EB right turns into "Australian" rights. Eliminate "merge" lane on Old 63 for EB-SB right turn.
3. Provide dual left turn lanes for NB Old 63. This includes relocation of the raised median and pavement markings. Also includes modification of the signals and extending the mast arm.
4. Add a new WB to NB right turn lane on Stadium Blvd. This includes a retaining wall on the north side of Stadium Blvd.
5. Add new sidewalk on west side of Old 63 from Stadium Blvd. south to Ashland Rd. Anticipate adding a curb & gutter to west side of Old 63, and placing sidewalk in location of current shoulder. For stretch south of access road entrance to Ashland Road, either narrow the vehicular lanes, or extend the box culvert.
6. Landscape the large concrete islands, including the largest island at southeast quadrant. Plant shrubs, ground cover, etc. and add red-colored barrier curb around perimeter.
7. Conversion of existing shoulder at southeast quadrant into paved sidepath for bicycles. The sidepath lines up with the EB bike lane.
8. Mill and overlay Old 63 from Stadium Blvd. south to Ashland Road.

Exhibit II

	City of Columbia, Missouri Department of Public Works	
	STADIUM BLVD. AND OLD 63 INTERSECTION IMPROVEMENTS	
Scale: 1"=60'	Dwn: D.G.W.	Date: 12/4/12

