AGREEMENT
For
PROFESSIONAL ENGINEERING SERVICES
Between
THE CITY OF COLUMBIA, MISSOURI
And
BURNS & MCDONNELL

THIS AGREEMENT made as of _____ day of _____, 20__, by and between the City of Columbia, Missouri (hereinafter called "CITY"), and **Burns & McDonnell** (hereinafter called "ENGINEER").

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

161-kV Route E Transmission Evaluation
(*Description of Project)*

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 **August 3, 2017** (hereinafter referred to as "Scope of Basic Services").

2.1.2 ENGINEER will designate the following listed individuals as its project team with responsibilities as assigned. 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 ENGINEER without the written approval of CITY.

Name and Title	Assignment
Zach Weiss, P.E.	**Project Manager**

All of the services required hereunder will be performed by 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 CITY and any work or services so subcontracted shall be subject to the provisions of this Agreement.

2.2 ENGINEER shall furnish such periodic reports as 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 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 CITY to assure proper accounting for all project funds. These records must be available to CITY or its authorized representatives, for audit purposes, and must be retained for three (3) years after expiration or completion of this Agreement.

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 Scope of Basic Services.

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 Scope of Basic Services.

4.3 Guarantee access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform ENGINEER's 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 **Ryan Williams, P.E., Assistant Director**, 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 within **270** calendar days from the issuance of the Notice to Proceed. 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.

SECTION 6 - PAYMENTS TO ENGINEER

6.1 Amount of Payment

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 **August 3, 2018,** 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 Basic Services and all other expenses and costs to CITY under this Agreement and described herein **shall not exceed $91,515.**

6.2 Payments

6.2.1 ENGINEER shall submit an invoice for services rendered to CITY not more than once every month. Upon receipt of the invoice and progress report, CITY will, as soon as practical, pay ENGINEER for the services rendered, provided CITY does not contest the invoice, to the extent of ninety-five percent (95%) of the uncontested amount earned. Upon completion and acceptance of the final plans by CITY, the five percent (5%) of these services retained by CITY will be paid to ENGINEER.

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, 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 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.

7.2 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 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.

7.2.3 Professional Oversight Indemnification
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 CITY from any and all claims, settlements and judgments whatsoever arising out of CITY's alleged negligence in hiring or failing to properly supervise ENGINEER. ENGINEER agrees to provide CITY with Certificate(s) of Insurance evidencing that all coverages, limits and endorsements are maintained and in full force and effect.

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 and/or schedule, upon execution of a mutually acceptable amendment or change order signed by an authorized representative of CITY and the President or any Vice President of 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 ENGINEER's 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.

7.7 Termination

Services may be terminated by the CITY at any time and for any reason, and by ENGINEER in the event of substantial failure to perform in accordance with the terms hereof by CITY through no fault of ENGINEER, by ten (10) days' notice. If so terminated, CITY shall pay ENGINEER all uncontested amounts due ENGINEER for all

services properly rendered and expenses incurred to the date of receipt of notice of termination.

7.7.1 In the event of CITY's termination of this 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 CITY become its property.

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

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, national origin, ancestry, marital status, disability, sexual orientation or gender identity. 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, national origin, ancestry, marital status, disability, sexual orientation or gender identity. 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 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, national origin, ancestry, marital status, disability, sexual orientation or gender identity.

7.9.3 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 Agreement 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 Agreement, 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 Agreement, 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 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.

In the event of a conflict between the terms and conditions of this Agreement and any attachment hereto, the terms contained in this Agreement shall prevail and the terms contained in any attachment shall subsequently prevail in the order attached hereto.

7.16 Entire Agreement

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

[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. **5513-00-70-760-7688-352-0000-600101-E0148**, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

By: _____
Director of Finance

BURNS & MCDONNELL

By: _____

Date: _____

ATTEST:

By: _____

Name: _____

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.

CITY OF COLUMBIA, MISSOURI
WORK AUTHORIZATION AFFIDAVIT
PURSUANT TO 285.530 RSMo
(FOR ALL BIDS IN EXCESS OF $5,000.00)

Effective 1/1/2009

County of _____)
) ss.
State of _____)

My name is _____. I am an authorized agent of _____ _____(Bidder). This business is enrolled and participates in a federal work authorization program for all employees working in connection with services provided to the City of Columbia. This business does not knowingly employ any person who is an unauthorized alien in connection with the services being provided. **Documentation of participation in a federal work authorization program is attached to this affidavit**.

Furthermore, all subcontractors working on this contract shall affirmatively state in writing in their contracts that they are not in violation of Section 285.530.1 RSMo and shall not thereafter be in violation. Alternatively, a subcontractor may submit a sworn affidavit under penalty of perjury that all employees are lawfully present in the United States.

_____
Affiant

_____
Printed Name

Subscribed and sworn to before me this _____ day of _____, 20__.

_____
Notary Public

ATTACHMENT A

SCOPE OF BASIC SERVICES

August 3, 2017

BURNS McDONNELL

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SCOPE OF BASIC SERVICES

THE CITY OF COLUMBIA, MO – ROUTE E EVALUATION

INTRODUCTION

Columbia Water & Light has requested a proposal from Burns & McDonnell for support services for the route evaluation of a proposed 161-kV transmission line located in Columbia, MO. The analysis will be performed on the newly proposed Route E option, which will parallel the existing Ameren-owned McCredie – Overton 345-kV transmission line. The route, approximately 13 miles in length, will extend from the City of Columbia's existing Perche Creek 161/69-kV Substation to a proposed new 161-kV substation, located near the existing Bolstad 161/69-kV Substation, owned by the City of Columbia.

The purpose of the analysis will be to study the feasibility of the route, determine potential impacts to the existing parallel 345-kV circuit, and to develop cost and acreage impacts of the new route. Upon completion of the route study, the results will be presented to the City of Columbia Council.

PROVIDED INFORMATION

Burns & McDonnel has been provided the following information as part of the City of Columbia's Request for Proposal:

- S49 – Columbia – McCredie–Overton ROW – Study Report – Final w-Maps.pdf

SCOPE OF WORK

Project Coordination and Administration

Kickoff Meeting

Burns & McDonnell will schedule a project kickoff conference call with the City of Columbia, after receiving authorization to proceed, to allow for an opportunity to discuss design related issues and any questions regarding the project scope, schedule, or project execution approach.

Project Scheduling

The City of Columbia shall be responsible for preparing and maintaining the project schedule as support activities progress and as milestone dates are determined. Burns & McDonnell will review the proposed project schedules upon receipt of project authorization. Burns & McDonnell will provide input on the major milestone dates. The City of Columbia shall be responsible for communicating all project schedule changes to Burns & McDonnell in a timely manner.

Project Status Meetings and Coordination

Burns & McDonnell intends to maintain regular communication with the City of Columbia regarding project updates via phone calls, meetings, and emails to meet the expectations of the project. Burns & McDonnell will direct all questions, concerns, and project status updates to the appropriate City of Columbia employee in a timely manner.

SCOPE OF BASIC SERVICES
(continued)

City of Columbia & Ameren Review Meetings

Burns & McDonnell will participate in up to three (3) review meetings to be held between the City of Columbia and Ameren. Two (2) Burns & McDonnell employees will attend the meetings, at a location to be determined later, to present the evaluation results, provide technical support, and answer design related questions.

Quality Management

Delivering a quality project is of the highest importance to Burns & McDonnell. We have a comprehensive quality management process that is as much a part of our culture as our emphasis on safety. The project manager will be responsible for overseeing and implementing our supplemental quality review processes.

Evaluation Approach

Project Assumptions

Burns & McDonnell will develop a set of project assumptions to be used in the route evaluation, regarding structure type, configuration, owner preferences, special clearance requirements, and other required analysis parameters. The assumptions will be based on meetings and discussions with the City of Columbia in the preliminary stages of the project. All final assumptions will be documented and transmitted to the City of Columbia in the final Report.

PLS-CADD

Burns & McDonnell will utilize PLS-CADD design software, as needed, to develop approximate span lengths and conceptual structure framing, and to determine Right-of-Way (ROW) width requirements. This software will not be used to perform detailed line design and structure spotting, but will be used only as an aid to meet the needs of the route evaluation.

Option E Route Analysis

Using the information provided by the City of Columbia, Burns & McDonnell will evaluate the proposed Route E, paralleling the existing McCredie – Overton 345-kV transmission line. The evaluation and feasibility study will include the following tasks:

- Approximation of average span length, structure height, and structure quantities
- Determination of required ROW width based on project assumptions and City of Columbia preferences
- High level review of “pinch points” (e.g. easement restrictions and other line obstructions) determined in the previously provided Study Report, prepared by Ameren
- Develop conceptual solutions to alignment constraints identified in the Ameren Study Report, to include possible rebuilt joint-use structures with the existing Ameren 345-kV transmission line
- Propose one (1) routing option into the Perche Creek and Bolstad Substations at each end of Route E (not parallel to the existing McCredie-Overton transmission line), to be used for cost estimating purposes

SCOPE OF BASIC SERVICES
(continued)

Option E Route Acreage Impact Analysis

After determination of the minimum required ROW width for the proposed circuit, Burns & McDonnell will prepare an acreage impact summary, using parcel data provided by the City of Columbia. The summary will include a detailed breakdown of the total quantity of parcels affected and the area of land required to be obtained for line construction. The breakdown will list the type of land for which the easement is needed, such as residential, cultivated fields, commercial, or forest, along with corresponding sum of acreage impacted. This information will then be used by the City of Columbia for feasibility and estimating purposes.

Cost Estimates

Burns & McDonnell will develop two (2) cost estimates as part of the proposed evaluation. The first estimate will include the approximate construction costs for the newly proposed Route E Evaluation and study. The estimate will be based on the conceptual structure material, framing, foundation, and hardware dictated by the City of Columbia in preliminary project discussions. Structure and material quantities will be based on the final project assumptions determined as part of the Route Evaluation. For the purpose of this estimate, it is assumed that the entirety of the new 161-kV route parallel to the existing McCredie – Overton line will be constructed on standalone single circuit 161-kV structures, and no joint-use structures will be needed.

An additional cost estimate will be developed for the transmission line scope of Route A, based on the previous analysis performed by the City of Columbia. Burns & McDonnell will use the structure and material quantities from the previously developed estimate and update the pricing to reflect present day costs.

Alternative Joint-Use Structure Design Review & Estimate

Although the original scope of work for this evaluation assumes the entirety of the proposed route will be single circuit 161-kV structures, the possibility of 345/161kV joint-use structures with the City of Columbia and Ameren is a viable design alternative in identified “pinch points”. In the event that the City of Columbia receives approval from Ameren to study this possibility, Burns & McDonnell is available to provide supplemental support and a revised cost estimate for this alternative.

Under the supplemental scope, Burns & McDonnell proposes to develop two (2) conceptual structure framing possibilities based on Ameren and City of Columbia transmission lines standards and code requirements. Conceptual structure framing exhibits will be prepared for transmittal and review by both parties. After review and discussion with both the City of Columbia and Ameren, the conceptual structures will be used to create a revised Route E cost estimate, including the new hardware and resulting foundation costs.

This supplemental scope has not been included in the original cost estimate. However, an estimate for this additional work has been provided in the “Estimated Hours and Cost” portion of the Proposal as an addendum to the original contract price.

SCOPE OF BASIC SERVICES
(continued)

Burns & McDonnell Deliverables

Route Evaluation Report

After completion of the Route E Evaluation, Burns & McDonnell will prepare a report summarizing the project overview, assumptions used, acreage impact, and study conclusions.

Cost Estimates

Burns & McDonnell will prepare and transmit to the City of Columbia two (2) separate cost estimates, as described in the Evaluation Approach section of the proposal.

City of Columbia Council Meeting

Upon completion and transmittal of the previous deliverables, two (2) Burns & McDonnell employees will attend one (1) City of Columbia Council meeting to discuss the evaluation results, provide recommendations, and answer resulting questions from the meeting attendees.

REQUIRED INFORMATION

In addition to the items provided by the City of Columbia as part of the Request for Proposal, Burns & McDonnell will require the following additional information for completion of the project:

- Proposed transmission line route (DXF or KMZ)
- Project schedule
- DXF files containing parcel boundaries, easements, geographic information (for acreage impact analysis), and road ROW extents
- DXF files containing the layout of the proposed 161-kV substation terminations
- Current revisions of all Columbia Water & Light transmission line standards
- City of Columbia structure framing, foundation, and hardware preferences
- Design information for the transmission portion of Route Option A, including all drawings, structure framing, material preferences, bill of materials, and any other pertinent design documents

CLARIFICATIONS

- Project management and analysis activities associated with the route evaluation have been estimated with a total anticipated duration of nine (9) months.
- The proposed estimates include expenses for travel, lodging, and meals for two (2) Burns & McDonnell employees to attend three (3) joint meetings between the City of Columbia and Ameren. Review meetings will be completed at a time agreed upon by the City of Columbia, Ameren, and Burns & McDonnell. The estimate also includes expenses for two (2) Burns & McDonnell employees to attend one (1) City Council meeting for the presentation of the study results. Burns & McDonnell assumes that no visit to the project site will be required for this study.

SCOPE OF BASIC SERVICES
(continued)

- The two (2) route cost estimates prepared by Burns & McDonnell will only include the material and labor costs (structures, hardware, foundations, wires, etc.) of the proposed transmission lines. These costs will be based on the most current pricing information available to Burns & McDonnell at the time of their preparation. Burns & McDonnell recognizes that the market conditions and availability of accurate design information could greatly impact the final construction costs. The City of Columbia will be responsible for determining costs associated with easement acquisition and other project indirects. The provided cost estimates are assumed to be to an accuracy level of AACE Class 4.
- Burns & McDonnell has not included funding in the estimate to account for any detailed line design, consisting of structure spotting using PLS-CADD software, structure loading calculations, or plan and profile development.
- The route not parallel to the existing McCredie – Overton transmission line, developed by Burns & McDonnel into both the Perche Creek and Bolstad substations, will be based on engineering judgement only, in an effort to minimize the impact on adjacent landowners and existing infrastructure. No environmental or cultural impact study will be performed as part of this routing effort. The intent of this proposed route is only to provide one route alternative to be used in the corresponding cost estimate.
- A review of environmental, wetland, or cultural impacts will not be performed as part of this study.
- Burns & McDonnell assumes that the City of Columbia will be responsible for the review of all easements required for this project. No labor has been included in the project estimate to account for the review of unique site-specific easement acquisition challenges.

SCHEDULE

Although no deliverable dates have been provided, Burns & McDonnell will work with the City of Columbia to develop a detailed project schedule after acceptance of the project Proposal. The work outlined above will commence ten (10) days following acceptance of the Notice to Proceed from the City of Columbia. The project has an assumed duration of nine (9) months.

ESTIMATED HOURS AND COST

Burns & McDonnell estimates a total fee for the Route E Evaluation project tasks of **$91,515**, based on **442** estimated labor hours and **$2830** for travel and other project related expenses. See the included cost estimate table for a detailed breakdown of the labor by task. The proposed hourly rate breakdown can be found in "Attachment B: Schedule of Hourly Labor Billing Rates".

If the additional scope noted in the "Alternative Joint-Use Structure Design Review and Estimate" portion of the proposal is desired as a revision to the original scope, a fee of **$17,781** will be requested as an addendum to the above referenced project estimate.

SCOPE OF BASIC SERVICES
(continued)

TERMS AND CONDITIONS

Burns & McDonnell proposes to complete these services on a time and material basis under the new Agreement for Professional Engineering Services between the City of Columbia, Missouri and Burns & McDonnell Engineering Company, Inc.

ATTACHMENT B

SCHEDULE OF HOURLY LABOR BILLING RATES

August 3, 2017

BURNS McDONNELL

SCHEDULE OF HOURLY LABOR BILLING RATES

August 3, 2017

POSITION CLASSIFICATION & LEVEL	HOURLY BILLING RATE
General Office - 5	$59.00
Technician - 6	$74.00
Assistant - 7	$84.00
Assistant - 8	$112.00
Assistant - 9	$134.00
Staff - 10	$152.00
Staff - 11	$166.00
Senior - 12	$183.00
Senior - 13	$203.00
Associate - 14	$213.00
Associate - 15	$223.00
Associate - 16	$227.00
Associate - 17	$232.00

Notes

- A technology charge of $9.95/hour will be added to the above listed labor billing rates for costs relating to printing, copying, scanning, software usage, computer hardware, conference call lines, and other technology related office expenses.
- All travel expenses, including lodging, meals, and transportation, will be billed to the City of Columbia at the direct cost to Burns & McDonnell.

COST ESTIMATE **The City of Columbia, MO**

Start Date: 9/1/2017 Route E Evaluation
Estimate End Date: 6/1/2018 Revision: 8/3/2017
Duration: 9 months

ACTIVITY DESCRIPTION	HOURS (BY CLASSIFICATION LEVEL)									TOTALS	EXPENSES (BY TYPE)				TOTALS($)
	Level 16	Level 14	Level 13	Level 12	Level 11	Level 10	Level 9	Level 8	Level 7		TRAVEL	LODGING	MEALS	EXPENSE	
PROJECT COORDINATION & ADMINISTRATION															
Project Intiation			8		24					32					
Kickoff Meeting (Conference Call)			2		2					4					
Project Scheduling			2		12					14					
Project Status Meetings & Coordination			27		27					54					
City of Columbia/Ameren Review Meetings			24		24					48	$1,000	$900	$250		
Quality Management			8		8					16					
ENGINEERING															
Design Assumptions			12		4					16					
PLS-CADD			20		4					24					
Route E Analysis			80		12					92					
Route E Acreage Impact			16		4					20					
Route E Cost Estimate			40		8					48					
Original Route Cost Estimate			24		2					26					
Route Evaluation Report			24		8					32					
City of Columbia Council Presentation			8		8					16	$300	$300	$80		
TOTAL HOURS	**0**	**0**	**295**	**0**	**147**	**0**	**0**	**0**	**0**	**442**					
LABOR BILLING RATE ($/hr)	$227.00	$213.00	$203.00	$183.00	$166.00	$152.00	$134.00	$112.00	$84.00						
TECHNOLOGY CHARGE ($/hr)	$9.95	$9.95	$9.95	$9.95	$9.95	$9.95	$9.95	$9.95	$9.95						
DIRECT EXPENSE ($)											**$1,300**	**$1,200**	**$330**	**$0**	
EXPENSE MULTIPLIER											1.00	1.00	1.00	1.00	
SUBTOTAL LABOR($)	**$0**	**$0**	**$59,885**	**$0**	**$24,402**	**$0**	**$0**	**$0**	**$0**						
SUBTOTAL EXPENSE ($)	**$0**	**$0**	**$2,935**	**$0**	**$1,463**	**$0**	**$0**	**$0**	**$0**		**$1,300**	**$1,200**	**$330**	**$0**	
CONTINGENCY (%) 0%	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**						
TOTAL LABOR, EXPENSE ($)	**$0**	**$0**	**$62,820**	**$0**	**$25,865**	**$0**	**$0**	**$0**	**$0**	**$88,685**	**$1,300**	**$1,200**	**$330**	**$0**	**$2,830**
GRAND TOTAL=						**$91,515**									



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