CITY		ENGINEER	
CITY OF JOPLIN **602 S. MAIN STREET** **JOPLIN, MO 64801**		Name: Burns & McDonnell Engineering Company, Inc. Address: 9400 Ward Parkway Kansas City, Missouri 64114	
Attention: Mr. Chris Parker, P.E.		Attention: Mr. Bill Nash, P.E.	
Department: Public Works - Engineering		Phone: 816-822-3858	Fax: 816-822-3414
Phone: 417-624-0820	Fax: 417-625-4738		

AGREEMENT FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES

THIS AGREEMENT, made and entered into this_____day of_____, 2016, by the parties identified above.

WITNESSETH:

THAT, WHEREAS, the City of Joplin desires to engage the Engineer to render certain technical and professional services in connection with a projects identified on future Work Authorizations to this Agreement;

WHEREAS, the Engineer made certain representations and statements to the City with respect to the provision of such services and the City has accepted said proposal; and

WHEREAS, the Engineer represents Engineer is licensed by the Missouri Board for Architects, Professional Engineers, and Land Surveyors to perform the services designated under this contract, and further represents that all survey services shall be done under the direction of a Land Surveyor licensed by the Missouri Board for Architects, Professional Engineers, and Land Surveyors;

NOW, THEREFORE, for the considerations herein expressed, it is agreed by and between the City and the Engineer as follows:

1. **Services.** The City agrees to engage the services of the Engineer and the Engineer agrees, upon receipt of each duly executed Work Authorization, to perform the services described in the Work Authorization. The services of the Engineer shall commence as soon as practicable after the execution of a Work Authorization, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract. The Engineer shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by the Engineer under this Agreement. Approval by the City and other agencies of drawings, designs, specifications, reports, and incidental engineering work or materials furnished hereunder shall not in any way relieve the Engineer of his responsibility for the technical adequacy of his work except as to matters involving peculiar conditions or uses of the property known to the City or other agencies but not to the Engineer.

2. **Term.** The services of the Engineer shall commence as soon as practicable after the execution of this contract, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract, but in any event, all of the services required hereunder shall be completed as set forth in the schedule for the project which is attached hereto as ***Exhibit A*** of any executed Work Authorization.

3. **Payment.** The City, pursuant to each fully executed Work Authorization, shall pay Engineer the consideration set forth in the Work Authorization, which shall constitute complete payment for the services furnished in connection with the work required to be performed under the Work Authorization.

4. **Exchange of Data**. All information, data, and reports as are in the City's possession and necessary for the carrying out of the work, shall be furnished to the Engineer without charge, and the parties shall cooperate with each other in every way possible in carrying out the scope of services.

5. **Personnel**. The Engineer represents that Engineer will secure at Engineer's own expense, all personnel required to perform the services called for under this contract by Engineer. Such personnel shall not be employees of or have any contractual relationship

with the City except as employees of the Engineer. All of the services required hereunder will be performed by the Engineer or under Engineer's direct supervision and all personnel engaged in the work shall be fully qualified and shall be authorized under state and local law to perform such services. None of the work or services covered by this contract shall be subcontracted without the written approval of the City.

6. **Termination of Contract.**

a. Termination for breach. Failure of the Engineer to fulfill Engineer's obligations under this contract in a timely and satisfactory manner in accordance with the schedule and description of services set forth in Exhibit A shall constitute a breach of the contract, and the City shall thereupon have the right to immediately terminate the contract. The City shall give written notice of termination to the Engineer by one of three different means: Facsimile Transmission ("FAX") if Engineer has a FAX number; U.S. Postal Service Mails; or by hand delivering a copy of the same to the Engineer; or may give notice by any combination of the above methods. The date of termination shall be the date upon which notice of termination is hand delivered to Engineer or given by FAX, or the third day following mailing of the notice of termination, whichever first occurs. In the event of termination for breach, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other materials prepared by the Engineer under this contract shall at the option of the City become its property, and the Engineer shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials; provided, that the Engineer shall not be relieved of liability to the City for damages sustained by the City by virtue of any such breach of the contract by the Engineer.

b. Right to terminate in the absence of breach. Either party may terminate this contract for any reason, by serving notice of intent to terminate upon the other party by the means specified in paragraph A of this section. Such notice shall specify the date of termination, but in no event shall either party terminate the contract under this provision upon less than thirty (30) days' notice to the other party; provided, that the parties may mutually agree to waive the thirty (30) day requirement and to shorten the time for notice of termination. In the event of termination in the absence of breach, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other materials prepared by the Engineer under this contract shall at the option of the City become its property, and the Engineer shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

7. **Conflicts**. No salaried officer or employee of the City, and no member of the City Council shall have a financial interest, direct or indirect, in this contract. A violation of this provision renders the contract void. Any federal regulations, and applicable provisions in Section 105.450 et seq. RSMo. shall not be violated. Engineer covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services to be performed under this contract. The Engineer further covenants that in the performance of this contract no person having such interest shall be employed.

8. **Assignment**. The Engineer shall not assign any interest in this contract, and shall not transfer any interest in the same (whether by assignment or novation), without prior written consent of the City thereto. Provided, however, that claims for money due or to become due to the Engineer from the City under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of such assignment or transfer shall be furnished in writing promptly to the City. Any such assignment is expressly subject to all rights and remedies of the City under this agreement, including the right to change or delete activities from the contract or to terminate the same as provided herein, and no such assignment shall require the City to give any notice to any such assignee of any actions which the City may take under this agreement, though City will attempt to so notify any such assignee.

9. **Confidentiality of Documents**. Any reports, data, design or similar information given to or prepared or assembled by the Engineer under this contract which the City requests to be kept as confidential shall not be made available to any individual or organization by the Engineer without prior written approval of the City.

10. **Discrimination.** The Engineer agrees in the performance of this contract not to discriminate on the ground or because of race, creed, color, national origin or ancestry, sex, religion, handicap, age, or political opinion or affiliation, against any employee of Engineer or applicant for employment and shall include a similar provision in all subcontracts let or awarded hereunder.

11. **Occupational License**: The Engineer shall obtain and maintain an occupational license with the City of Joplin, Missouri, if required by city code and any required state or federal license. The cost for this occupational license shall be borne by the Engineer. No contract will be executed by the City until this occupational license has been obtained and that the Engineer is current on any City taxes is verified.

12. **Compliance with Laws**. Engineer agrees to comply with all applicable federal, state and local laws or rules and regulations applicable to the provision of services and products hereunder. Engineer affirmatively states that payment of all local, state, and federal taxes and assessments owed by Engineer is current.

13. **Affidavit for Contracts Over $5,000.00**. That pursuant to Missouri Revised Statute Sections 285.525 through 285.550, if this contract exceeds the amount of $5,000.00 and Engineer is associated with a business entity, Engineer shall provide an acceptable notarized affidavit stating that the associated business entity is enrolled in and participates in a federal work authorization program with respect to the employees working in connection with the contracted services, and that said business entity does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. Additionally, Engineer must provide documentation for said business entity evidencing current enrollment in a federal work authorization program.

14. **Nonresident/Foreign Contractors**. The Engineer shall procure and maintain during the life of this contract:

a. If the Engineer is a foreign corporation, a certificate of authority to transact business in the State of Missouri from the Secretary of State, unless exempt pursuant to the provisions of Section 351.572 RSMo.

b. A certificate from the Missouri Director of Revenue evidencing compliance with the transient employer financial assurance law, unless exempt pursuant to the provisions of Section 285.230 RSMo.

15. **General Independent Contractor Clause**. This agreement does not create an employee/employer relationship between the parties. It is the parties' intention that the Engineer will be an independent contractor and not the City's employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, Missouri revenue and taxation laws, Missouri workers' compensation and unemployment insurance laws. The Engineer will retain sole and absolute discretion in the judgment of the manner and means of carrying out the Engineer's activities and responsibilities hereunder. The Engineer agrees that it is a separate and independent enterprise from the public employer, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the Engineer and the City, and the City will not be liable for any obligation incurred by the Engineer, including but not limited to unpaid minimum wages and/or overtime premiums.

16. **City Benefits**. The Engineer shall not be entitled to any of the benefits established for the employees of the City nor be covered by the Worker's Compensation Program of the City.

17. **Liability and Indemnity**. The parties mutually agree to the following:

a. The Engineer shall defend, indemnify, and hold the City harmless from and against all damages, losses, liabilities, expenses, and costs with respect to all claims, including, but not limited to, claims for personal injuries, wrongful death, and damages to property, which may be asserted against the City by any person or entity as the result of Engineer's (or any of Engineer's subcontractors) negligent acts, errors, or omissions in the course of the performance of this contract, provided that the Engineer is not obligated to indemnify or hold harmless the City from the City's own negligence or wrong doing.

b. The Engineer shall indemnify and hold the City harmless from all wages or overtime compensation due its employees in rendering services pursuant to this agreement, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act or any other federal or state law.

c. In no event shall the City be liable to the Engineer for special, indirect, or consequential damages, except those caused by the City's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the City shall be limited to the amount of money to be paid or received by the City under this contract.

18. **Ownership of Documents.** All files and information will be submitted before or upon final approval and acceptance of the contract documents. All documents, including original drawings, calculations, computer runs, field notes, drawings, estimates, specifications, written design criteria and written reports are and remain the property of the Engineer until such time as this Agreement is, for any reason, terminated, at which time they become the property of the City. The Engineer shall furnish to the City, one set of reproducible record Mylars of drawings, AutoCAD files and copies of estimates, specifications, written reports, and written design criteria, in consideration of which the City will use them fully in connection with the project and will not sell them.

19. **Notices**. All notices required or permitted hereinunder and required to be in writing may be given by FAX or by first class mail addressed to City and Engineer at the addresses shown above. The date of delivery of any notice given by mail shall be the date falling on the third day after the day of its mailing. The date of delivery of notice by FAX transmission shall be deemed to be the date transmission occurs, except where the transmission is not completed by 5:00 p.m. on a regular business day at the terminal of the receiving party, in which case the date of delivery shall be deemed to fall on the next regular business day for the receiving party.

20. **Jurisdiction**. This agreement and every question arising hereunder shall be construed or determined according to the laws of the State of Missouri. Should any part of this agreement be litigated, venue shall be proper only in the Circuit Court of Jasper County, Missouri.

21. **Entire Agreement**. This agreement contains the entire agreement of the parties. No modification, amendment, or waiver of any of the provisions of this agreement shall be effective unless in writing specifically referring hereto, and signed by both parties.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

REVIEWED FOR APPROVAL

Chris Parker, P.E.
Sanitary Sewer Engineer

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefore.

Leslie Haase, Director of Finance

APPROVED AS TO FORM

Peter Edwards, City Attorney

Engineer:

Burns & McDonnell Engineering Company Inc.

By: _____

Printed Name: Ron Coker, P.E.

Title: Senior Vice President, Water

Date: _____

CITY OF JOPLIN, MISSOURI

By: _____
Nicholas A. Heatherly, P.E.
Public Works Director

Date: _____

CITY		ENGINEER	
CITY OF JOPLIN **602 S. MAIN STREET** **JOPLIN, MO 64801**		Name: Burns & McDonnell Engineering, Inc. Address: 9400 Ward Parkway, Kansas City, MO 64114	
Attention: Mr. Chris Parker, P.E.		Attention: Bill Nash, P.E.	
Department: Public Works - Engineering		Phone: 816-822-3858	Fax: 816-822-3414
Phone: 417-624-0820	Fax: 417-625-4738		

WORK AUTHORIZATION NUMBER BMC-OA-001
TO AGREEMENT FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES

City and Engineer agree to amend their Agreement for Professional Engineering Consulting Services to include a scope of work and fees for engineering services, by adding the following terms to their Agreement.

1. **Services**. The City agrees to engage the services of the Engineer and the Engineer agrees to perform the services hereinafter set forth in connection with projects described in ***Exhibit A***.

2. **Addition to Services**. The City may add to the Engineer services or delete therefrom activities of a similar nature to those set forth in ***Exhibit A***, provided that the total cost of such work does not exceed the total cost allowance as specified in Paragraph 5 hereof. The Engineer shall undertake such changed activities only upon the direction of the City. All such directives and changes shall be in written form and prepared and approved by the City and shall be accepted and countersigned by the Engineer.

3. **Term**. The services of the Engineer shall commence as soon as practicable after the execution of this contract, unless otherwise directed in writing, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract, but in any event, all of the services required hereunder shall be completed as set forth in the schedule for the project which is attached hereto as ***Exhibit A***.

4. **Costs not to Exceed**. The City of Joplin is limited by law with respect to the amount of money it can pay. Therefore, the City has established a fixed sum for this contract, which cannot be exceeded unless this contract is amended. The Engineer providing services hereunder shall be required to keep track of the amount of hours billable under this contract at all times; and any work in excess of the fixed sum shall not be eligible for payment. The Engineer shall notify the City if Engineer anticipates that the contract amount may be exceeded, in order to determine whether or not the City is prepared to increase the total compensation. The Engineer shall establish a billing system showing the amount of money remaining on the contract, which shall be shown in each monthly billing.

5. **Payment**.

a. **Conditioned upon acceptable performance**. The City agrees to pay the Engineer in accordance with the terms set forth in ***Exhibit A***, which shall constitute complete compensation for all services to be rendered under this contract; provided, that where payments are to be made periodically to Engineer for services rendered under this contract, the City expressly reserves the right to disapprove in whole or in part a request for payment where the services rendered during the period for which payment is claimed are not performed in a timely and satisfactory manner in accordance with the schedule and description of services set forth in ***Exhibit A***.

b. **Total compensation not to exceed**. It is expressly understood that in no event will the total compensation and reimbursement to be paid to the Engineer under the terms of this work Authorization Number BMC-OA-001 exceed the sum of One Hundred Fifty One Thousand Four Hundred and no/100 Dollars ($151,400.00).

6. **Insurance**. Without limiting any of the other obligations or liabilities of the Engineer, the Engineer shall secure and maintain at its own cost and expense, throughout the duration of this Contract and until the work is completed and accepted by the City of Joplin, insurance of such types and in such amounts as may be necessary to protect it and the interest of the City of Joplin against a l l hazards or risks of loss as hereunder specified or which may arise out of the performance of the Contract Documents. The form and

limits of such insurance, together with the underwriter thereof in each case, are subject to approval by the City of Joplin. Regardless of such approval, it shall be the responsibility of the Engineer to maintain adequate insurance coverage at all times during the term of the Contract. Failure of the Engineer to maintain coverage shall not relieve it of any contractual responsibility or obligation or liability under the Contract Documents.

The certificates of insurance, including evidence of the required endorsements hereunder of the policies, shall be filed with the City at the time that this contract is signed by the Engineer. All insurance policies shall provide thirty (30) days written notice to be given by the insurance company in question prior to modification or cancellation of such insurance. Such notices shall be mailed, certified mail, return receipt requested, to:

City of Joplin - Public Works, 602 S. Main, Joplin, MO 64801; and

Such policies shall name the City as an additional insured with limits of liability not less than the sovereign immunity limits for Missouri public entities calculated by the Missouri Department of Insurance as of January 1 each calendar year and published annually in the Missouri Register pursuant to Section 537.610, RSMo.
(See, http://insurance.mo.gov/industry/sovimmunity.php).

As of January 1, 2016, the minimum coverage for the insurance referred to herein shall be as set out below:

a. Workers' Compensation….Statutory coverage per RSMo 287.010 et seq.
Employer's Liability…… $1,000,000.00

b. Commercial General Liability Insurance, including coverage for Contractual Liability and Independent Contractors Liability. Such coverage shall apply to bodily injury and property damage on an "Occurrence Form Basis" with limits of at least Two Million Seven Hundred Twenty-Seven Thousand Four Hundred Eighty-Nine and no/100 Dollars ($2,727,489.00) for all claims arising out of a single accident or occurrence and at least Four Hundred Nine Thousand One Hundred Twenty-Three and no/100 Dollars ($409,123.00) with respect to injuries and/or death of any one person in a single occurrence and an amount not less than at least $1,000,000 for all claims to property arising out of a single occurrence and at least $100,000 to any one owner with respect to damages to property. Engineer agrees that the proceeds of such insurance policy shall first be used to pay any award, damages, costs, and/or attorney's fees incurred by or accessed against City, its employees, officers and agents, before payment of any award, damages, costs or attorney's fees of Engineer, its employees, officers or agents. Engineer agrees to cause its insurer to name City as an additional insured on such insurance policy, including the City as an additional insured for coverage under its products-completed operations hazard, and said policy shall be primary and noncontributory.

c. Automobile Liability Insurance covering bodily injury and property damage for owned, non-owned and hired vehicles, with limits of at least Two Million Seven Hundred Twenty-Seven Thousand Four Hundred Eighty-Nine and no/100 Dollars ($2,727,489.00) for all claims arising out of a single accident or occurrence and at least Four Hundred Nine Thousand One Hundred Twenty-Three and no/100 Dollars ($409,123.00) with respect to injuries and/or death of any one person in a single accident or occurrence.

d. Errors and Omissions Insurance. The Engineer shall maintain a professional liability insurance policy in the amount of $1,000,000.00. This policy shall remain in full force and effect for a period of one year after completion and acceptance by the City of the construction of the project.

e. Subcontracts. In case any or all of this work is sublet, the Engineer shall require the subcontractor to procure and maintain all insurance required in subparagraphs (A), (B) and (C) hereof and in like amounts. Engineer shall require any and all subcontractors with whom it enters into a contract to perform work on this project to protect the City of Joplin through insurance against applicable hazards or risks and shall, upon request of the City, provide evidence of such insurance.

f. Notice. The Engineer and/or subcontractor shall furnish the City prior to beginning the work satisfactory proof of carriage of all the insurance required by this contract, with the provision that policies shall not be canceled, modified or non-renewed without thirty (30) days written notice to the City of Joplin.

g. Legislative or Judicial Changes. In the event the scope or extent of the City's tort liability as a governmental entity as described in Section 537.600 through 537.650 RSMo is broadened or increased during the term of this agreement by legislative or judicial action, the City may require Engineer, upon 10 days written notice, to execute a contract addendum whereby the Engineer

agrees to provide, at a price not exceeding Engineer's actual increased premium cost, additional liability insurance coverage as the City may require to protect the City from increased tort liability exposure as the result of such legislative or judicial action. Any such additional insurance coverage shall be evidenced by an appropriate certificate of insurance and shall take effect within the time set forth in the addendum.

7. All other terms and conditions of the original Agreement shall remain in effect.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

REVIEWED FOR APPROVAL

Chris Parker, Sanitary Sewer Engineer

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefore.

Leslie Haase, Director of Finance

APPROVED AS TO FORM

Peter Edwards, City Attorney

Engineer: Burns & McDonnell Engineering Co, Inc.

By: _____

Printed Name: Ron Coker, P.E.

Title: Senior Vice President, Water

Date: _____

CITY OF JOPLIN, MISSOURI

By: _____
Nicholas A. Heatherly, P.E.
Public Works Director

Date: _____

Exhibit A - TABLE OF CONTENTS

Engineering Services Agreement 6-8

Attachment Number One to Exhibit A 9-12

Services 9-12

Terms 12

Payment/Estimated Fee 12

Attachment Number Two to Exhibit A 13

Rate Schedule 13

Engineering Services Agreement

Article 1 of the Agreement is supplemented to include the following agreement of the parties.

Engineer shall provide Basic and Additional Services as set forth below.

PART 1 – BASIC SERVICES *All deliverables referred to in the agreement shall also be provided in an electronic format to be specified by the City.*

A1.01 *Conceptual Phase*

A. Engineer shall:

1. Consult with Owner to define and clarify Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations, and identify available data, information, reports, facilities plans, and site evaluations.

   If Owner has already identified one or more potential solutions to meet its Project requirements, then proceed with the study and evaluation of such potential solutions. Options will be discussed and agreed to by Engineer at scoping meeting.

2. Identify potential solution(s) to meet Owner's Project requirements, as needed.

3. Study and evaluate the potential solution(s) to meet Owner's Project requirements.

4. Visit the Site, or potential Project sites, to review existing conditions and facilities, unless such visits are not necessary or applicable to meeting the objectives of the Study and Report Phase.

5. Advise Owner of any need for Owner to obtain, furnish, or otherwise make available to Engineer additional Project-related data and information, for Engineer's use in the study and evaluation of potential solution(s) to Owner's Project requirements, and preparation of a related report.

6. After consultation with Owner, recommend to Owner the solution(s) which in Engineer's judgment meet Owner's requirements for the Project.

7. Identify, consult with, and analyze requirements of governmental authorities having jurisdiction to approve the portions of the Project to be designed or specified by Engineer, including but not limited to mitigating measures identified in an environmental assessment for the Project.

8. Prepare a conceptual report (the "Report") which will, as appropriate, contain schematic layouts, sketches, and conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, considerations involved, and

Engineer's recommended solution(s). For each recommended solution Engineer will provide the following, which will be separately itemized: opinion of probable Construction Cost; proposed allowances for contingencies; the estimated total costs of design, professional, and related services to be provided by Engineer and its Consultants; and, on the basis of information furnished by Owner, a tabulation of other items and services included within the definition of Total Project Costs.

9. Advise Owner of any need for Owner to provide data or services for use in Project design, or in preparation for Contractor selection and construction.

10. When mutually agreed, assist Owner in evaluating the possible use of building information modeling; civil integrated management; geotechnical baselining of subsurface site conditions; innovative design, contracting, or procurement strategies; or other strategies, technologies, or techniques for assisting in the design, construction, and operation of Owner's facilities.

11. If requested to do so by Owner, assist Owner in identifying opportunities for enhancing the sustainability of the Project, and pursuant to Owner's instructions plan for the inclusion of sustainable features in the design.

12. Develop a scope of work and survey limits for any topographic and other surveys necessary for design.

13. Perform or provide the following other Study and Report Phase tasks or deliverables:

14. Furnish 6 review copies of the Report and any other Study and Report Phase deliverables to Owner by the due date and review by phone or in person with Owner.

15. Revise the Report and any other Study and Report Phase deliverables in response to Owner's comments, as appropriate, and furnish 6 copies of the revised Report and any other Study and Report Phase deliverables to the Owner by the agreed upon due date.

B. Engineer's services under the Study and Report Phase will be considered complete on the date when Engineer has delivered to Owner the revised Report and any other Study and Report Phase deliverables.

C. Billing/Payment Processing Options

1. Request for payment may be submitted at appropriate intervals during the contract. Application for payment must include a detailed breakdown of deliverables completed as well as specific tasks or percentages of specific tasks completed. Payment schedule will be at the approval of the city.

A1.02 Preliminary Design Phase - (30 percent plans)

Not included with scope of services.

A1.03 *Utility Requirements*

Not included with scope of services.

A1.04 Surveying Services – General

Not included with scope of services.

A1.05 Right of Way Plan Phase – 60 percent plans

Not included with scope of services.

A1.06 Final Design Phase

Not included with scope of services.

A1.07 Bidding Phase

Not included with scope of services.

A1.08 Construction Phase

Not included with scope of services.

A1.09 Post-Construction Phase

Not included with scope of services.

PART 2 – ADDITIONAL SERVICES

A2.01 *Additional Services Requiring Owner's Written Authorization*

A. If authorized in writing by Owner, Engineer shall provide Additional Services of the types listed below. These services are not included as part of Basic Services and will be paid for by Owner as indicated.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Undertaking investigations and studies including, but not limited to:

a. Detailed consideration of operations, maintenance, and overhead expenses.

ATTACHMENT NUMBER ONE
EXHIBIT A TO WORK AUTHORIZATION NUMBER BMC-OA-001 TO AGREEMENT
FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES
(Between the City of Joplin, Missouri and Burns & McDonnell Engineering, Inc.)

1. SCOPE OF SERVICES – PHASE I

ENGINEER shall provide the City of Joplin, Missouri (OWNER) with the following Phase I scope of services:

1.1. General

1.1.1. ENGINEER shall provide project management, coordination with ENGINEER's subcontractors, utility companies, City staff, jurisdictional agencies, City Council, and public and private shareholders.

1.1.2. ENGINEER shall review previous reports relating to the Shoal Creek watershed and the Tin Cup and Filmore Bridge pump stations and force mains.

1.1.3. ENGINEER shall provide monthly updates on Project status to the OWNER.

1.1.4. In general, the Project consists of the following:

1.1.4.1. Coordinating the planning, design, and construction of improvements within the Shoal Creek drainage basin including improvements to the Tin Cup and Filmore Bridge pump stations and force mains.

1.2. FLOW AND RAINFALL MONITORING

1.2.1. Flow and rainfall data collection activities will focus only on priority assessment areas identified by the ENGINEER in consultation with the OWNER. The flow and rainfall monitoring task comprises of a base period of ninety (90) days. The monitoring period may be shortened based on the number of sufficient rainfall events recorded.

1.2.2. ENGINEER shall install up to ten (10) flow monitors for up to ninety (90) days. A site assessment of potential flow monitoring sites will be made to determine, in general, the most suitable flow monitoring locations based on the following conditions:

1.2.2.1. Suitability for accurate metering. The accuracy of open channel flow metering will depend on numerous variables that should be controlled as much as possible. For this reason, reconnaissance inspections will be performed to identify sites for metering and to minimize such error-causing factors as changes in pipe alignment and size, interruption of channel flow by side inlets and turbulence caused by uneven channels.

1.2.2.2. Safety. It is equally important that the proposed sites conform to ENGINEER's requirements for safe operating conditions. If the site falls outside of these requirements, alternate sites that are suitable based on safety requirements will be selected upon further consultation with the OWNER.

1.2.3. ENGINEER shall complete site assessment forms for each flow monitoring location. The ENGINEER shall provide up to ten (10) electronic depth/velocity flow monitors (ISCO 2150). These units will be initially installed and site calibrated for the 90-day monitoring period.

1.2.3.1. The flow monitors shall be maintained by ENGINEER on an as needed basis. Maintenance shall include the upload and interrogation of all flow data, meter calibration (as needed), velocity profiling, and other diagnostic checks. Flow monitors

shall remain in place for up to a continuous 90-day base period. ENGINEER shall remove all monitors at the conclusion of the monitoring period.

1.2.3.2. ENGINEER will require the use of the City's continuous recording electronic rain gauges within the study area during the same 90-day base monitoring period. The City's rain gauges should record rainfall to one-hundredths of inch increments. The instruments will be checked and downloaded weekly by the City. Data collected from rain gauges will be analyzed by ENGINEER to correlate peak system flows to peak rainfall intensity and duration.

1.2.4. Flow and Rainfall Monitoring Deliverables.

1.2.4.1. ENGINEER shall provide flow hydrographs and rainfall hyetographs for each flow monitoring location and each rain gauge location in electronic format. Both raw and adjusted data shall be provided.

1.3. HYDRAULIC MODEL DEVELOPMENT

1.3.1. Level of Service Workshop. ENGINEER will prepare and undertake a Level of Service, Cost and Design Workshop (Workshop 1) to identify the basis of evaluation of the existing Shoal Creek sewer collection system including lift stations and force mains. The expected outcome of this workshop is that a design level of service rainfall event will be selected. Additionally, it is expected that the cost basis for pump stations and force mains, etc. will be agreed and used in the preparation of project costings.

1.3.2. Conduct a data gap analysis. Evaluate the quality and completeness of the source data, organize and classify data for hydraulic model development, and recommend additional data collection as necessary. This may include manhole inspections and/or other physical inspections as outlined below. The hydraulic model will be limited to the Tin Cup and Filmore Bridge pumping stations and associated wet wells and force mains.

1.3.3. Model Development. The hydraulic modeling software, InfoWorks ICM 6.5, will be used to develop a hydraulic model of the Tin Cup and Filmore Bridge pumping stations and associated wet wells and force mains. Data relevant to the hydraulic modeling effort for each modeled pumping station, including data defining the installed pumping units, station firm capacity, wet well dimensions, pump operating control settings, force main size and length, and field-developed system head curves for force mains serving pump stations will be provided by the CITY and entered into the Hydraulic Model. Data which is required for Hydraulic Modeling purposes but not available will be populated according to standard industry practice.

1.3.3.1. Asset data contained in CITY's existing GIS dataset will be utilized for hydraulic model development.

1.3.3.2. Undertake pump station drawdown testing for the Filmore and Tin Cup Pump Stations for the purpose of assessing pump rates to be used in the Hydraulic Model.

1.3.3.3. Flow Analysis. Undertake an analysis of flow metering data for up to four (4) flow meters to estimate average dry weather flow (ADWF) and peak dry weather flow (PDWF).

1.3.3.4. Perform dry weather calibration for up to four (4) flow meters. Calibration consists of modifying model parameters to be consistent with monitored, observed flows in the system. The model simulation is performed and the model output is compared to the measured dry weather flows. If this comparison meets a prescribed

level of accuracy, +20 percent, -10 percent, or +/-0.5 mgd for flow variations and total volume quantities, then the model is considered calibrated.

1.3.3.5. Perform wet weather calibration for up to four (4) flow meters. Calibration consists of modifying model parameters to be consistent with monitored, observed flows in the system. The model simulation is performed and the model output is compared to the measured wet weather flows. If this comparison meets a prescribed level of accuracy, +20 percent, -10 percent, or +/-0.5 mgd for flow variations and total volume quantities, then the model is considered calibrated. Up to five rainfall events with different characteristics will be selected for wet weather calibration.

1.3.3.6. Perform wet weather verification for up to four (4) flow meters. Verification will confirm that the calibrated model responds appropriately under a variety of conditions.

1.3.4. Estimate Existing Flows. The calibrated and verified hydraulic model produced in 1.3.3.6 and the selected level of service from item 1.3.1 will be used to estimate existing flows (hydrographs, peak flow rate, flow volume) conveyed by the collection system to the Tin Cup and Filmore Bridge pumping stations.

1.3.5.CIP Development for the Tin Cup and Filmore Bridge pump stations and force mains.

1.3.5.1. Use existing conditions model to develop CIPs for existing year.

1.3.5.2. Identify and evaluate potential pump station operational optimization opportunities.

1.3.5.3. CIP Cost Estimate. Use cost basis agreed in Workshop 1 to prepare a planning level costs for the recommended CIP. Prepare a phased implementation schedule for the recommended CIP and associated budgetary expenditure profile.

1.3.6.Deliverables. ENGINEER shall prepare a technical memorandum documenting Task 1.3.

1.4. PUMP STATION HYDRAULIC REVIEW

1.4.1. ENGINEER shall conduct a hydraulic review of the Tin Cup and Filmore Bridge pump stations. The hydraulic review shall include the following:

1.4.1.1. A review the lift station and force main as-built drawings.

1.4.1.2. ENGINEER shall conduct a hydraulic review of the existing Tin Cup and Filmore Bridge pump stations. Review shall include review of existing pump curves, development of system resistance curves, and a comparison of actual pumping capacity to stated design capacity.

1.5. AIR RELEASE VALVE INSPECTION

1.5.1. ENGINEER shall conduct an inspection of the three (3) air release valves located along the Tin Cup and Filmore Bridge force mains. Recommendations for air release valve repair or replacement shall be made based on the results of the inspection.

2. TERMS

2.1. Schedule: The services of the ENGINEER shall commence as soon as practicable after execution of this authorization, unless otherwise directed in writing, and shall be undertaken and completed is such sequence as to assure their expeditious completion in the light of the purposes of the authorization, but in any event, all of the services required hereunder for this Work Authorization scope of services shall be completed no later than September 1, 2017.

2.2. Distribution of compensation between individual tasks indicated in Section 3 may be altered as necessary to be consistent with services actually rendered, but shall not exceed the total compensation amount unless approved in writing by the OWNER.

3. PAYMENT

3.1. Payment to ENGINEER shall be at the hourly labor rates and non-labor rates set forth in the Attachment Number Two to Exhibit A: "Schedule of Hourly Rates and Expenses"; with a total compensation not to exceed amount of $151,400.00, as set forth in Work Authorization Number BMC-OA-001 to the Agreement for Professional Engineering Consulting Services, Section 5.b. with the maximum fees broken down for respective services in more detail as follows:

Phase I Services	Estimated Fee
Project Management and Administration	$15,900
Flow and Rainfall Monitoring	$73,100
Hydraulic Model Development	$49,100
Pump Station Hydraulic Review	$11,500
Air Release Valve Inspection	$1,800
Total Estimated Maximum Fee	$151,400

Contingency Items Not Included in Base Phase I Fees	Estimated Fee
Flow and Rainfall Data Analysis	$1,900 per site
Dry Weather Calibration for More Than Four Sites	$500 per site
Wet Weather Calibration for More Than Four Sites	$700 per site
Wet Weather Verification for More Than Four Sites	$400 per site

Attachment Number Two

Schedule of Hourly Rates and Expenses

Position Classification	Classification Level	Hourly Billing Rate
General Office*	5	$59.00
Technician*	6	$76.00
Assistant*	7	$87.00
	8	$119.00
	9	$139.00
Staff*	10	$152.00
	11	$168.00
Senior	12	$183.00
	13	$203.00
Associate	14	$213.00
	15	$223.00
	16	$227.00
	17	$232.00

Unit Cost Rates

Description	Unit Cost
Flow Meter Installation	$450.00/each
Flow Monitoring (minimum 5 meters)	$65.00/meter-day
Rain Gauge Monitoring	$15.00/gauge-day

NOTES:

1. Position classifications listed above refer to the firm's internal classification system for employee compensation. For example, "Associate", "Senior", etc., refer to such positions as "Associate Engineer", "Senior Architect", etc.

2. For any nonexempt personnel in positions marked with an asterisk (*), overtime will be billed at 1.5 times the hourly labor billing rates shown.

3. Project time spent by corporate officers will be billed at Level 17 rate plus 25 percent.

4. For outside expenses incurred by Burns & McDonnell, such as authorized travel and subsistence, and for services rendered by others such as subcontractors, the client shall pay the cost to Burns & McDonnell plus 10%.

5. Monthly invoices will be submitted for payment covering services and expenses during the preceding month. Invoices are due upon receipt. A late payment charge of 1.5% per month will be added to all amounts not paid within 30 days of the invoice date.

6. The services of contract/agency personnel shall be billed to Owner according to the rate sheet as if such contract/agency personnel is a direct employee of Burns & McDonnell.

7. The rates shown above are effective for services through December 31, 2017, and are subject to revision thereafter.