EXHIBIT A

SCOPE OF SERVICES

FILMORE / TIN CUP FORCEMAIN DESIGN

BACKGROUND INFORMATION

The *Operational Assessment of the Filmore and Tin Cup Lift Stations* was completed in November 2017, identified the need to install a separate force main to serve the Filmore Bridge Lift Station to keep pace with the City's growing wastewater demands. The report recommends the design and construction of a separate force main to convey the Filmore Bridge Lift Station flows. The new forcemain will generally run from the Filmore Bridge lift station South along Coyote Drive, then West along Apricot Drive to the existing manhole on the 42-inch diameter Shoal Creek gravity interceptor sewer.

The work shall generally consist of providing preliminary design, survey, geotechnical assessment, route layout confirmation, environmental review, hydraulic review, multi-agency coordination and permitting, final design construction plans and specifications, bid phase services, and construction phase services.

TASK SERIES 100 – PROJECT COORDINATION, COMMUNICATION, AND MANAGEMENT

Task 101 - Project Management/Administration

Provide the management functions required to successfully complete the scope of work. Tasks include:

A. Correspondence with the City of Joplin, MO (City)
B. Consultation with City staff
C. Supervision and coordination of services
D. Implementation of a project specific work plan
E. Implementation of a quality control/quality assurance plan
F. Scheduling and assignment of personnel resources
G. Monitoring of work progress
H. Invoicing for work performed
I. Providing project status updates to City

Task 102 – Preparation of Design Schedule

Develop a project schedule outlining the tasks and major milestone dates to be performed throughout the project design phase. Schedule will be provided to the City for review and comment.

Task 103 – Conduct Project Kickoff Meeting with City Staff

Attend a project kick-off meeting to be held with City staff. The meeting shall include discussion of pertinent items for the project such as:

A. Present project background and overview.
B. Introduce key staff involved in the project including City personnel who are to provide information/services.
C. Determine lines of communication and project contacts (contact list to be developed).
D. Identify available existing data and exchange.
E. Discuss key issues, objectives and goals.
F. Review the preliminary project schedule and milestones.
G. Discuss issues of particular concern for the City.
H. Define sub-consultants and their roles.
I. Outline possible community concerns, neighboring residents, businesses, easements, etc.
J. Discuss considerations for inter-connections with the existing system.
K. Discuss other pertinent items.
L. A meeting agenda and subsequent meeting minutes will be distributed to all meeting participants.

Task 104 – Data Collection & Review

Review available information from the City related to the project. Identify and request any additional information that may be helpful or pertinent to the work. Information may include copies of existing reports, record drawings, GIS data, existing easement documentation and/or existing permits.

Task 105 – Attend Monthly Progress Meetings

Project Manager and necessary team members will attend monthly progress meetings with City staff to review work progress to date, upcoming work activities, actions required by the City, design and/or schedule concerns, and any other items that may be relevant to the project. A meeting agenda and subsequent meeting minutes will be distributed to all meeting participants. 30%, 60% and 90% review meetings will be included or combined with the monthly progress meetings if possible.

Task 106 – Coordination with Sub-consultants

Retain sub-consultants for necessary tasks such as survey and geotechnical services. Coordinate and work with sub-consultants as necessary throughout the project.

TASK SERIES 200 – PRELIMINARY DESIGN SERVICES

Task 201 – Conduct Survey Services

A. Topographic and Utility Survey
   1. A topographic and utility survey of the project corridor will be prepared. Existing utilities will be located and shown as part of the survey drawings.

Task 202 – Perform Geotechnical Investigations

A. Perform Soil Borings
   1. Soil borings are anticipated to be taken at 200-foot intervals along the project alignment as terrain and geography allows.
   2. Soils borings are anticipated to be augered to refusal or to 10-foot in depth.
   3. Soil samples will be tested and a written report provided.

Task 203 – Environmental Services and Permitting

Wetlands:

The U.S. Army Corps of Engineers (USACE) has jurisdiction over wetlands and other waters of the U.S. in accordance with Section 404 of the Clean Water Act. To determine the location and boundaries of wetlands, streams, and navigable waterways that may be affected by the proposed project, Burns & McDonnell proposes to conduct a desktop evaluation, perform a wetland delineation, write a wetland delineation report, and coordinate permitting efforts to obtain the necessary USACE permits for the proposed project.

Conduct a desktop evaluation of the project using soil surveys, site topographic maps, and National Wetland Inventory (NWI) maps to identify potential jurisdictional areas. Information reviewed will include 7.5-minute topographic maps, NWI maps, National Hydrography Dataset (NHD), Federal Emergency Management Area (FEMA) floodplain maps, the local county soil survey, and available aerial photography for the project corridor.

Conduct a field visit to evaluate the proposed project corridor for the presence of wetlands and other waters according to USACE requirements. The site visit will consist of a pedestrian survey by a wetland scientist and a global positioning system (GPS) specialist to identify any wetlands or other water bodies of the U.S. that may be present and to record locations and boundaries using GPS. These areas will be delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (USACE Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Version

2.0: Eastern Mountains and Piedmont Region (Regional Supplement). In addition, Burns & McDonnell will gather information on the hydric soils, wetland hydrology, and upland and wetland vegetation of the project corridor. The wetland scientist will assess whether a delineated area is likely to be considered under the jurisdiction of the USACE by determining if a hydrologic connection to waters of the U.S. exists. As part of this effort, photographs will also be taken onsite to provide a visual documentation of any identified features.

Based on the desktop evaluation and wetland delineation, Burns & McDonnell will prepare a wetland delineation letter report describing the background research, methodologies, and results. In addition, the report will include completed wetland determination data forms from the Regional Supplement, photographs of identified waters, and figures of the project corridor. Burns & McDonnell will provide the draft letter report to the City for review and one round of comments. Burns & McDonnell will address any comments, finalize the report, and provide a final electronic version to City. Up to three hard copies of the report can be provided, if requested.

Prepare a permit application and assist City with follow-up support throughout the review process. Burns & McDonnell will submit the permit application package and coordinate with the USACE and respond to requests for additional information.

Threatened & Endangered (T&E) Species:

Complete a desktop review of available information from the U.S. Fish and Wildlife Service (USFWS) and Missouri Department of Conservation (MDC) to determine which protected species and habitat could occur within the county and vicinity of the proposed project.

Complete a protected species habitat assessment field survey for the proposed project. The habitat assessment survey will be conducted at the same time as the wetland delineation field survey. Photographs will be taken to document any wildlife habitat within and adjacent to the proposed project. The location of any observed potential protected species habitats will be photographed and delineated using a GPS with sub-meter accuracy.

Based on the results of the desktop review of available information and habitat assessment field survey, Burns & McDonnell will prepare a protected species habitat assessment letter report. The protected species habitat assessment letter report would be suitable for submittal to the USFWS and MDC to obtain their concurrence with the findings of the habitat assessment.

Provide the draft habitat assessment letter report to the City for review and one round of comments. Burns & McDonnell will address any comments, finalize the report, and provide a final electronic version to City. If requested by the City, the protected species habitat assessment letter report will be submitted to the USFWS and MDC for their review and concurrence with the findings and conclusions presented in the habitat assessment letter report.

Burns & McDonnell will assist City with follow-up support throughout the USFWS and MDC project review process and will answer questions and respond to requests for additional information.

Cultural Resources:

A USACE permit may be required for the proposed project. As such, Burns & McDonnell would coordinate with the Missouri State Historic Preservation Office (SHPO) to determine requirements for cultural resources clearance. A desktop cultural resources study would be completed by Burns & McDonnell archaeologists by reviewing SHPO cultural resources database, cultural resources management reports from the vicinity, and historic topographical maps. It is assumed that a cultural resources field survey would be required. Burns & McDonnell archaeologists would prepare a cultural

resources report that includes the results of background research and field survey. The report would be submitted to the City for review and one round of comments.

Construction within a Floodplain Permit

Will provide permitting specialists to draft the construction within a floodplain permit application and submittal to City for one round of comments. It is assumed that the City will submit the final application package to Newton County to obtain the permit.

State and/or County Road Crossing Permit:

Depending on which entity claims jurisdiction of the roads that are crossed, the project may require State and/or County Road Crossing Permits. Burns & McDonnell will assist City by coordinating with Missouri Department of Transportation (MoDOT) and/or Newton County to obtain permits for construction within road rights-of-way and any proposed crossings of Apricot Lane and Coyote Drive. Burns & McDonnell will work with City to prepare permit application packages with necessary support drawings for submittal to MoDOT and/or Newton County for review and approval.

Assumptions for All Environmental Tasks:

- City will provide landowner permission to access the project route.
- The wetland delineation will be conducted under normal circumstances with no atypical situations as defined by the USACE Manual.
- It is assumed that the wetland delineation will be conducted within the normal growing season.
- Delays causing demobilization associated with weather, access, and other unforeseen events are not included.
- Species specific presence/absence surveys requiring a state or federal permit will not be required.
- If the USFWS or MDC require species specific presence/absence surveys requiring a state or federal permit, Burns & McDonnell will submit a separate scope and cost estimate for the species-specific presence/absence survey effort.
- All tree removal for the project will occur from October 1 to March 31 to avoid impacting potential summer maternity roosting habitat for protected bat species.
- The habitat assessment field survey will occur at the same time as the wetland field work.
- Efforts and cost for mitigation associated with wetlands or protected species are not included.
- No cost for cultural resource artifact collection or curation is included with this scope and cost estimate. If collection and/or removal of artifacts from any given property or properties is required, then written and signed authorization from each land owner to remove artifacts from their property must be obtained by City and provided to Burns & McDonnell.
- If cultural or historic resources are identified that could be eligible for the National Register of Historic Places, additional investigations may be necessary and a cost estimate can be provided.
- Cultural resources study does not include deep dig testing.
- A HEC/RAS study would not be required to obtain a construction within a floodplain permit.
- Six routine construction inspections and five rainfall event inspections would occur during construction. Following construction, three additional inspections during site restoration would occur.

Task 204 – Preparation of Preliminary Design Memorandum

A. Evaluate up to three potential project alignments and prepare a preliminary alignment memorandum. This will include a hydraulic analysis that will evaluate the forcemain size and material. A planning level opinion of probable construction cost will be included for the evaluated alternatives.

Task 205 – Predesign Review Meeting

A predesign review meeting will be held at City offices to present and discuss the findings of the preliminary design memorandum. Meeting minutes, including action items will be distributed to all participants.

Task 206 – Preparation of 30% Design Documents

A. Preparation of 30% Design Documents
   1. Project team will generate base plan sheets utilizing aerial mapping and survey data. Plan sheets will be developed to a 30% level for review of pipeline alignment.
   2. Plan sheets shall be 22" X 34".
   3. Pipeline profiles will not be developed at this level of design. Profiles will be developed after the horizontal alignment is set.
   4. Two (2) full sized drawing sets, and three (3) half sized drawing sets will be provided to the City for review. Electronic copies may also be provided if preferred.

B. 30% Design Review Meeting
   1. A design review meeting will be held with City staff. The 30% design documents will be presented and reviewed in detail with the City. City staff may provide written comments to be presented at the 30% design meeting. Meeting minutes, including a list of action items, will be distributed to all meeting participants.
   2. Once 30% design plans have been approved by City and forcemain alignment has been set, easement preparation will commence as outlined in Task 302.

C. Evaluation of Filmore Bridge Lift Station Operation
   Conduct an evaluation of the existing operations of the Filmore Bridge lift station including the new forcemain. Recommendations for any necessary changes will be documented in a technical memorandum

TASK SERIES 300 – FINAL DESIGN SERVICES

Task 301 – Preparation of 60% Design Documents

A. Prepare 60% Design Documents
   1. Plans shall be developed to the 60% design level.
   2. Plans will address 30% design review comments.
   3. 60% design plans shall include:
      a. Proposed alignment
      b. Ground surface profile
      c. Pipeline profile
      d. Buried utility crossings
      e. Pipeline crossing locations: Highway, Roads
      f. Proposed interconnect locations
      g. Additional detail drawings that are needed for final design.
   4. Two (2) full sized drawing sets, and three (3) half sized drawing sets will be provided to the City for review. Electronic copies may also be provided if preferred.

B. Prepare Preliminary Technical Specifications
   1. A listing of necessary technical specification sections will be developed. The technical specification sections will be developed to a 60% level.

C. Perform 60% Internal Quality Review
   1. The 60% design documents, including, plans, specifications and calculations, will undergo an internal quality review. Plans and specifications will be reviewed for design and construction considerations.

D. Prepare 60% Engineer's Opinion of Probable Construction Cost
   1. Based on the 60% design drawings, our project team will prepare the EOPCC for the project. This EOPCC will be submitted along with the design documents for review and comment by the City. Our EOPCC will be based on a combination of recent bid tabulation information, historical cost data, discussions with local suppliers and contractors, and RSMeans

Construction Cost Data. Relevant and significant assumptions will be included for reference. This EOPCC will include a 20% contingency.

E. Conduct 60% Design Review Meeting
   1. A design review meeting will be held with City staff. The 60% design documents will be presented and reviewed in detail with the City. City staff may provide written comments to be presented at the 60% design meeting. Meeting minutes, including a list of action items, will be distributed to all meeting participants.

Task 302 – Easements

A. Prepare Updated Easement Legal Descriptions and Exhibits
   1. Legal descriptions and exhibits will be prepared and provided to the City for up to five properties.
B. City is responsible for obtaining and filing signed easement documents.

Task 303 – Preparation of 90% Design Documents

A. Prepare 90% Design Documents
   1. Plans shall be refined to the 90% design level.
   2. Plans will address 60% design review comments.
   3. Temporary and permanent easements information, land ownership information and all design related appurtenances shall be included.
   4. Plans shall include sufficient detail for bidding.
   5. Plans will meet the requirements of the Missouri Department of Natural Resources.
   6. Two (2) full sized drawing sets, and three (3) half sized drawing sets will be provided to the City for review. Electronic copies may also be provided if preferred.
B. Finalize Technical Specifications
   1. All applicable technical specification sections will be finalized.
   2. Specifications will meet the requirements of the Missouri Department of Natural Resources.
C. Prepare Front End Specifications
   1. Non-technical front end specifications will be developed and provided for the City's review.
D. Prepare 90% Engineer's Opinion of Probable Construction Cost
   1. Based on the 90% design drawings, our project team will prepare the EOPCC for the project. This EOPCC will be submitted along with the design documents for review and comment by the City. Our EOPCC will be based on a combination of recent bid tabulation information, historical cost data, discussions with local suppliers and contractors, and RSMeans Construction Cost Data. Relevant and significant assumptions will be included for reference. This EOPCC will include a 15% contingency.
E. Conduct 90% Design Review Meeting
   1. A design review meeting will be held with City staff. The 90% design documents will be presented and reviewed in detail with the City. City staff may provide written comments to be presented at the 90% design meeting. Meeting minutes, including a list of action items, will be distributed to all meeting participants.
F. Submit Documents for State Review
   1. Plans, technical specifications and other necessary documentation will be submitted to the Missouri Department of Natural Resources for review and approval.

Task 304 – Preparation of 100% (Final) Design Documents

A. Prepare 100% (Final) Design Documents
   1. Plans and specifications shall be completed at the 100% design level. Two (2) full sized drawing sets, three (3) half sized drawing sets, and five (5) copies of the final specifications will be provided to the City. Final documents shall also be provided in AutoCAD (version 2014 or later), Microsoft Word, and Adobe Acrobat (.pdf) formats. These documents will be utilized as the Issued for Bid documents.
B. Prepare 100% Engineer's Opinion of Probable Construction Cost

1. Based on the 100% design drawings, our project team will prepare the EOPCC for the project. This EOPCC will include a 10% contingency.

TASK SERIES 400 – BID PHASE SERVICES

Task 401 – Prepare Advertisement for Bid

Prepare the bid advertisement which will specifically outline the work requirements, Contractor requirements, bond requirements, and important bid dates and times. We will coordinate with the City how the advertisement should be provided to potential Contractors.

Task 402 – Preparation and Distribution of Issued for Bid Documents

Coordinate bidding procedures with the City. We will provide up to ten (10) sets of hard copy documents for the City to have available for pickup at its office by prospective bidders. Provide electronic copies of the documents to prospective bidders at the City's request. The City shall maintain the official list of plan holders.

Task 403 – Preparation and Distribution of Addenda

Respond to questions from Contractors during the bidding process, assemble and transmit addenda information as necessary. The addenda will be incorporated into the Contract Documents.

Task 404 – Conduct Pre-Bid Conference with Prospective Bidders

Our Project Manager will attend the pre-bid conference to assist the City's staff in answering questions concerning the design of the project. The meeting agenda will cover important and noteworthy conditions or requirements associated with the bid and the work. Meeting minutes and the sign-in sheet will be distributed to meeting attendees and prospective bidders via addendum.

Task 405 – Provide Bid Opening Assistance

Our Project Manager will attend the bid opening and assist City staff with the bid opening. Bid conditions including discrepancies and irregularities will be documented.

Task 406 – Evaluation of Bids

All of the bids will be collected and evaluated for conformance, completeness, and costs. Irregularities will be documented. An overall bid tabulation will be developed showing all of the provided bid costs in a single spreadsheet. This bid tab will help identify computational errors and uncertainties in the bid process. Check the apparent low bidders' references to verify their qualifications, intent, and availability. Conversations with references will be well documented as to help support the recommendation for award.

Task 407 – Recommendation for Construction Contract Award

Provide a formal, written Contractor recommendation for Award, which can be presented to the Council. Our recommendations will consider Contractor's qualifications, reference checks, and other relevant considerations.

TASK SERIES 500 – CONSTRUCTION PHASE SERVICES

Task 501 – Attend a Pre-construction Conference

Participate in a pre-construction conference prior to commencement of Work at the Site.

Task 502 – Review Shop Drawings and Data Submittals

Receive, review, and accept shop drawings, samples, and data submitted by the Contractor as required by the Construction Contract Documents. Review and acceptance will only be to determine if the items covered by the submittals will, after installation or incorporation into the Work, conform to the

requirements in the Contract Documents and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The review and acceptance of a separate item as such will not indicate acceptance of the assembly in which the item functions. Review does not indicate a thorough review of all dimensions, quantities, and details of the material, equipment, device, or item covered. This task includes time to review up to sixteen (16) submittals for the Force Main project, including the initial review and one subsequent review.

Review and acceptance will not extend to means, methods, techniques, sequences or procedures of construction (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.

Review and acceptance of shop drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called attention to each such variation at the time of submission as required by the Contract Documents and Burns and McDonnell has given written acceptance of each such variation by specific written notation thereof incorporated into or accompanying the shop drawing or sample acceptance; nor will any acceptance by Burns and McDonnell relieve Contractor from responsibility for complying with the requirements of the Contract Documents. Distribute Contractor's submittals as specified in the Construction Contract Documents.

Task 503 - Stormwater Routine Inspections:

Provide stormwater specialists to perform the routine inspections required by the Missouri Department of Natural Resources (MDNR) Construction Stormwater Permit and the initial training for the site personnel over the SWP3. This will include site inspections once every two weeks and within 24 hours of all rainfall events which exceed 0.5 inches in accordance with local weather results or rain gauge placed onsite. Each visit will include a meeting with the Site Manager and a review of the sites Best Management Practices (BMPs) to verify compliance with the SWP3 and an inspection report documenting the site compliance, issues, or no-compliances along with some potential recommendations, issues, or non-compliances. Site inspection reports with photographs will be provided to the City via email the following day in PDF format.

Task 504 – Prepare Conforming to Construction Record Drawings

Prepare conforming to construction drawings based solely on the red-line drawing markups provided by the Contractor and Resident Project Representative(s). In the case of discrepancies between the two sets of information, the Contractor's red-lines shall be followed unless directed differently by the City.

1. TERMS

1.1 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, 2018.

1.2 Distribution of compensation between individual tasks indicated in Section 2 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.

2. PAYMENT

2.1 Payment to the ENGINEER shall be at the hourly labor rates and non-labor rates set forth in the Attchment Number Two to Exhibit A: "Schedule of Hourly Rates and Expenses"; with a total compensation not to exceed amount of $194,170.00, 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 Coordination	$37,440
Survey Services	$6,000
Geotechnical Investigations	$13,580
Preliminary Design Services	$70,973
Easement Preparations	$7,026
Final Design Services	$35,181
Bid Phase Services	$9,948
Construction Phase Services	$14,022
Total Estimated Maximum Fee	$194,170

END OF EXHIBIT A