

# Contract for Professional Architectural and Engineering Services

## Project W.O. 19-42, West End Water Treatment Plant Project

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In consideration of the mutual promises herein, City of Billings and Burns & McDonnell Engineering Company Inc. agree as follows. This Contract consists of:

Part I, consisting of 15 Sections of Special Provisions;

Part II, consisting of 11 Sections of General Provisions;

Appendix A consisting of 9 pages (Basic Services of Contractor);

Appendix B consisting of 1 pages (Methods and Times of Payment);

Appendix C consisting of 1 page (Additional Services of Contractor);

Appendix D consisting of 1 pages (Schedule of Professional Fees);

Appendix E consisting of 1 page (Project Schedule);

Appendix F consisting of 5 pages (Certificate(s) of Insurance); and

### **PART I SPECIAL PROVISIONS**

#### Section 1. Definitions.

In this Contract:

- A. "Administrator" means the City Engineer of the Engineering Division of the Public Works Department or his designee.
- B. "Billings" means the City of Billings.
- C. "Contractor" means Burns & McDonnell Engineering Company Inc.

#### Section 2. Scope of Services.

- A. The Contractor shall perform professional services in accordance with Appendix A, which is attached hereto and incorporated in this Section by reference.
- B. Billings shall pay the Contractor in accordance with the Schedule of Professional Fees attached as Appendix D and incorporated herein by reference for services actually performed under this Contract.

- C. Billings shall not allow any claim for services other than those described in this Section. However, the Contractor may provide, at its own expense, any other services that are consistent with this Contract.
- D. The Engineer shall provide record drawings as approved by the City of Billings, to the Administrator within 30 days after the project completion date. Final payment will be withheld until the record drawings are received by the City of Billings. Requirements for submitting record drawings completed Private Contracts, Work Orders, Special Improvement Districts and Site plans involving any City of Billings infrastructure: a point file; 1 (\*.asc, \*.txt, comma delimited; point number, northing, easting, elevation and description) / 2 (\*.csv, with headings for; point number, northing, easting, elevation and description), with northings and eastings to the nearest tenth of a foot, elevations to the nearest hundredth of a foot, representing new, updated or relocated City of Billings infrastructure features such as, but not limited to Sanitary Sewer Manholes, Storm Drain Manholes, Water Valves, Water Bends, Signals, Street Light, etc., in the coordinates of Montana State Plane, Zone 2500 using NAD83(2011), Horizontal and NAVD88 Vertical, Horizontal units and Vertical units will be International feet, one half size paper copy to scale, one full size paper copy to scale, two CD's or DVD's with PDF files being half size to scale and full size to scale and AutoCAD DWG files as-constructed / as-built, Version 2016, or equivalent.

### Section 3. Time for Performance.

- A. This Contract becomes effective when signed on behalf of Billings.
- B. The Contractor shall commence performance of the Work described in Section 2 on receipt of written Notice to Proceed and complete that performance in accordance with the schedule set forth in Appendix E.
- C. This Contract shall terminate at midnight on December 31, 2020.

### Section 4. Compensation; Method of Payment.

- A. Each month, or at the conclusion of each phase of the Work for which payment is due, as negotiated on a per-task basis, the Contractor shall present a bill to the Administrator describing the Work for which it seeks payment and documenting expenses and fees to the satisfaction of the Administrator. If any payment is withheld because the Contractor's performance is unsatisfactory, the Administrator must, within ten (10) days of the payment denial, notify the Contractor of the payment denial and set forth, with reasonable specificity, what was unsatisfactory and why. Billings will pay Contractor within 30 days of receiving an acceptable invoice.
- B. The Contractor is not entitled to any compensation under this Contract, other than is expressly provided for in this Section.
- C. As a condition of payment, the Contractor shall have paid all City taxes currently due and owing by the Contractor.

### Section 5. Termination of the Contractor's Services.

The Contractor's services under Section 2 of this Part may be terminated:

- A. By mutual consent of the parties.
- B. For the convenience of Billings, provided that Billings notifies the Contractor in writing of its intent to terminate under this paragraph at least 10 days prior to the effective date of the termination.
- C. For cause, by either party where the other party fails in any material way to perform its obligations under this Contract. Termination under this Subsection is subject to the condition that the terminating party notifies the other party of its intent to terminate, stating with reasonable specificity the grounds therefor, and the other party fails to cure the default within 30 days after receiving the notice.

#### Section 6. Duties Upon Termination

- A. If Billings terminates the Contractor's services for convenience, Billings shall pay the Contractor for its actual costs reasonably incurred in performing before termination and Billings shall pay for services rendered prior to termination. Payment under this Subsection shall never exceed the total compensation allowable under Section 4 of this Part. All finished and unfinished documents and materials prepared by the Contractor shall become the property of Billings.
- B. If the Contractor's services are terminated for cause, Billings shall pay the Contractor the reasonable value of the services satisfactorily rendered prior to termination, less any damages suffered by Billings because of the Contractor's failure to perform satisfactorily. The reasonable value of the services rendered shall never exceed ninety percent (90%) of the total compensation allowable under Section 4 of this Part. Any finished or unfinished documents or materials prepared by the Contractor under this Contract shall become the property of Billings at its option.
- C. If the Contractor receives payments exceeding the amount to which it is entitled under Subsections A or B of this Section, he shall remit the excess to the Administrator within 30 days of receiving notice to do so.
- D. The Contractor shall not be entitled to any compensation under this Section until the Contractor has delivered to the Administrator all documents, records, Work product, materials and equipment owned by Billings and requested by the Administrator.
- E. If the Contractor's services are terminated for whatever reason the Contractor shall not claim any compensation under this Contract, other than that allowed under this Section.
- F. If a final audit has not been performed before the Contractor's services are terminated, Billings may recover any payments for costs disallowed as a result of the final audit.
- G. Except as provided in this Section, termination of the Contractor's services under Section 5 of this Part does not affect any other right or obligation of a party under this Contract.

#### Section 7. Insurance.

- A. The Contractor shall maintain in good standing the insurance described in Subsection B of this Section. Before rendering any services under this Contract,

the Contractor shall furnish the Administrator with proof of insurance in accordance with Subsection B of this Section.

B. The Contractor shall provide the following insurance:

1. Workers' compensation as required by Montana law and employer's liability coverage with limits of \$1,000,000 per accident.
2. Commercial general liability, including contractual and personal injury coverage's -- \$1,500,000 per occurrence and \$2,000,000 general aggregate.
3. Commercial automobile liability -- \$1,500,000 per accident.
4. Professional liability in the amount of \$1,500,000 per claim and in the aggregate.

C. Each policy of insurance required by this Section shall provide for no less than 30 days' advance notice to Billings prior to cancellation.

D. Billings SHALL be included as an additional insured on all policies except Professional Liability and Worker's Compensation Policies. In addition, all policies except Professional Liability and Worker's Compensation shall contain a waiver of subrogation against Billings, where allowed by law. Billings and Contractor release each other and waive all rights of subrogation against each other and their officers, directors, agents, or employees for damage covered by property insurance or that could be covered by property insurance if self-insured (including deductibles) during and after the completion of Contractor's services. A provision similar to this shall be incorporated into all construction contracts entered into by Billings for work related to the Work or Services, and all Billings' construction contractors shall be required to provide waivers of subrogation in favor of Billings and Contractor for damage or liability covered by any of Billings' contractor's policies of insurance and Contractor shall be added as an additional insured on those policies of insurance, in the same manner, and to the same extent, as Billings.

#### Section 8. Assignments.

Unless otherwise allowed by this Contract or in writing by the Administrator, any assignment by the Contractor of its interest in any part of this Contract or any delegation of duties under this Contract shall be void, and an attempt by the Contractor to assign any part of its interest or delegate duties under this Contract shall give Billings the right immediately to terminate this Contract without any liability for Work performed.

Contractor may engage temporary staffing agencies or obtain assistance from its affiliates and subsidiaries including, without limitation, Burns & McDonnell Canada Ltd., Burns & McDonnell International Inc., and Burns & McDonnell India Pvt. Ltd. ("Labor Sources") to fulfill Contractor's performance obligations under this Agreement. The parties agree that contracts, purchase orders, or similar agreements between Contractor and any Labor Sources are not subcontracts as that term is used in this Agreement, and personnel from such Labor Sources shall be billed according to the applicable rate sheet for the Scope of Work as if such personnel is a direct hire employee. Personnel from Labor Sources shall be considered agents of Contractor and able to act on behalf of Contractor within the scope of the authority granted such personnel according to job function and billing classification.

Section 9. Ownership; Publication, Reproduction and Use of Material.

- A. Except as otherwise provided herein, all data, documents and materials produced by the Contractor under this Contract shall be the property of Billings, which shall retain the exclusive right to publish, disclose, distribute and otherwise use, in whole or in part, any such data, documents, or other materials. Exclusive rights shall not be attributed to portions of such materials presently in the public domain or which are not subject to copyright. Contractor shall retain rights to pre-existing proprietary property including but not limited to interactive models. The Contractor shall have the right to include photographic or artistic representations of the design and construction of the Project among the Contractor's promotional and professional materials. The Contractor's materials shall not include Billings' confidential or proprietary information regardless of whether Billings has previously advised the Contractor in writing of the specific information considered by Billings to be confidential and proprietary.
- B. Equipment purchased by the Contractor with Contract funds: See Appendix A, Section 3. Scope of Work.
- C. Should Billings elect to reuse or use, without Contractor's involvement Work products provided under this Contract for other than the original project and/or purpose, Billings will indemnify and hold harmless the Contractor from any and all claims, demands and causes of action of any kind or character arising as a result of reusing the documents developed under this contract. Additionally, any reuse of design drawings or specifications provided under this Contract must be limited to conceptual or preliminary use for adaptation, and the original Contractor's or subcontractor's signature, professional seals and dates removed. Such reuse of drawings and specifications, which require professional seals and dates removed, will be signed, sealed, and dated by the professional who is in direct supervisory control and responsible for adaptation.

Section 10. Notices.

Any notice required pertaining to the subject matter of this Contract shall be either sent via facsimile (FAX) or mailed by prepaid first class registered or certified mail, return receipt requested to the following addresses:

Billings: Randy Straus  
City of Billings  
Engineering Division  
2224 Montana Avenue  
Billings, Montana 59101 FAX: (406) 237-6291

Contractor: Jason Schaefer  
Burns & McDonnell Engineering Company Inc.  
9785 Maroon Circle, Suite 400  
Centennial, CO 80112 FAX: (303) 721-0563

Notices are effective upon the earlier of receipt, proof of good transmission (facsimiles only), or 5 days after proof of proper posting.

### Section 11. Contract Budget.

In connection with its performance under this Contract, the Contractor shall not make expenditures other than as provided in line items in the Contract budget.

### Section 12. Force Majeure.

- A. Any failure to perform by either party due to force majeure shall not be deemed a violation or breach hereof.
- B. As used in this Contract, force majeure is an act or event of substantial magnitude, beyond the control of the delayed party, which delays the completion of this Contract, including without limitation:
  - 1. Any interruption, suspension or interference resulting solely from the act of Billings or neglect of Billings not otherwise governed by the terms of this Contract.
  - 2. Strikes or Work stoppages.
  - 3. Any interruption, suspension or interference with the project caused by acts of God, or acts of a public enemy, wars, blockades, insurrections, riots, arrests or restraints of governments and people, civil disturbances or similar occurrences.
  - 4. Order of court, administrative agencies or governmental officers other than Billings.

### Section 13. Financial Management System.

The Contractor shall establish and maintain a financial management system that:

- A. Provides accurate, current, and complete disclosure of all financial transactions relating to the Contract;
- B. Maintains separate accounts by source of funds for all revenues and expenditures and identifies the source and application of funds for the Contractor's performance under this Contract, including information pertaining to subcontracts, obligations, unobligated balances, assets, liabilities, outlays and income;
- C. Effectively controls and accounts for all municipal funds and Contract property;
- D. Compares actual expenditures with budgeted amounts and relates financial information to performance or productivity data including unit cost information where applicable;
- E. Allocates administrative costs to direct service delivery units;
- F. Minimizes the time between receipt of funds from Billings and their disbursement by the Contractor;
- G. Provides accounting records supported by source documentation; and
- H. Provides a systematic method for the timely and appropriate resolution of audit findings and recommendations.

### Section 14. Funding Requirements.

In the event that any funding source for this Contract should impose additional requirements upon Billings for the use of those funds, the Contractor agrees to abide by those additional requirements immediately upon receipt of written notice thereof from Billings.

Section 15. Subcontracts.

The Contractor may enter into subcontracts for the purchase of goods and services necessary for the performance of this Contract, provided:

- A. Every subcontract shall be reduced to writing and contain a precise description of the services or goods to be provided and the nature of the consideration paid therefor.
- B. Every subcontract under which the Contractor delegates the provision of services shall be subject to review and approval by the Administrator before it is executed by the Contractor.
- C. Every subcontract in an amount exceeding \$1,000 shall require reasonable access to business records of the subcontractor relating to the purchase of goods or services pursuant to the subcontract.

**PART II**  
**GENERAL CONTRACT PROVISIONS**

Section 1. Relationship of Parties.

The Contractor shall perform its obligations hereunder as an independent Contractor of Billings. Billings may administer the Contract and monitor the Contractor's compliance with its obligations hereunder. Billings shall not supervise or direct the Contractor other than as provided in this Section.

Section 2. Nondiscrimination.

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, age, sex, or marital status or who is a "qualified individual with a disability" (as that phrase is defined in the Americans With Disabilities Act of 1990). The Contractor will take affirmative action to see that applicants are employed and that employees are treated during employment without regard to their race, color, religion, or mental or physical impairment/disability. Such action shall include, without limitation, employment, upgrading, demotion or transfer, recruitment or recruiting advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor agrees to post, in conspicuous places available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
- B. The Contractor shall state, in all solicitations or advertisements for employees to Work on Contract jobs, that all qualified applicants will receive equal consideration for employment without regard to race, color, religion, national origin, ancestry, age, sex or marital status, or mental or physical impairment/disability.
- C. The Contractor shall comply with applicable reporting requirements that may apply to it which the City of Billings may establish by regulation.
- D. The Contractor shall include the provisions of Subsections A through C of this Section in every subcontract or purchase order under this Contract, so as to be binding upon every such subcontractor or vendor of the Contractor under this Contract.
- E. The Contractor shall comply with all applicable federal, state, and city laws concerning the prohibition of discrimination.
- F. The Contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), which prohibit discrimination against qualified protected veterans and/or qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

Section 3. Permits, Laws, and Taxes.

The Contractor shall acquire and maintain in good standing permits, licenses and other entitlements necessary to its performance under this Contract. Performance under taken by the Contractor under this Contract shall comply with applicable statutes, ordinances, rules and regulations in effect as of the date of Contractor's proposal. The Contractor shall pay taxes pertaining to its performance under this Contract.

Section 4. Nonwaiver.

The failure of either party at any time to enforce a provision of this Contract shall in no way constitute a waiver of the provision, nor in any way affect the validity of this Contract or any part hereof, or the right of such party thereafter to enforce each and every provision hereof.

Section 5. Amendment.

- A. This Contract shall only be amended, modified or changed by a writing, executed by authorized representatives of the parties, with the same formality as this Contract was executed.
- B. For the purposes of any amendment modification or change to the terms and conditions of this Contract, the only authorized representatives of the parties are:

Contractor: Daniel Korinek (Vice President) or Authorized Signatory

Billings: City Council or Authorized Designee

- C. Any attempt to amend, modify, or change this Contract by either an unauthorized representative or unauthorized means shall be void.

Section 6. Jurisdiction; Choice of Law.

Any civil action rising from this Contract shall be brought in the District Court for the Thirteenth Judicial District of the State of Montana, Billings. The law of the State of Montana shall govern the rights and obligations of the parties under this Contract.

If a dispute arises relating to the performance of the services to be provided and, should that dispute result in litigation, it is agreed that the substantially prevailing party (as determined in equity by the court) shall be entitled to recover all reasonable costs of litigation, including staff time, court costs, attorney's fees, and other related expenses.

The parties shall participate in good faith negotiations to resolve any and all disputes. Should negotiations fail, the parties agree to submit to and participate in a third party-facilitated mediation as a condition precedent to resolution by litigation. Unless otherwise agreed to, mediation shall be conducted under the rules of the American Arbitration Association and shall be held in Billings, Montana.

The parties agree that any dispute between them, including any action against an officer, director or employee of a party, arising out of or related to this Contract, whether in contract or tort, not resolved through direct negotiation and mediation, shall be resolved by litigation in the state or federal courts located in Yellowstone County, Montana, and each party expressly consents to jurisdiction therein. Any litigation to compel or enforce, or otherwise affect the mediation shall be in the state or federal courts location in Yellowstone County, Montana, and each party expressly consents to jurisdiction therein.

Causes of action between the parties shall accrue, and applicable statutes of limitation shall commence to run the date of Contractor's services are substantially complete.

Section 7. Severability.

Any provision of this Contract decreed invalid by a court of competent jurisdiction shall not invalidate the remaining provisions of the Contract.

Section 8. Integration.

This instrument and all appendices and amendments hereto embody the entire agreement of the parties. There are no promises, terms, conditions or obligations other than those contained herein; and this Contract shall supersede all previous communications, representations or agreements, either oral or written, between the parties hereto.

Section 9. Liability.

The Contractor shall indemnify, reimburse for defense of, save Billings for losses, damages and expenses arising from any wrongful or negligent act, error or omission of the Contractor or any agent, employee or subcontractor as a result of the Contractor's or any subcontractor's performance pursuant to this Contract.

- A. The Contractor shall not indemnify, defend, save and hold Billings harmless from claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses or attorneys' fees and costs arising from wrongful or negligent acts, error or omission solely of Billings occurring during the course of or as a result of the performance of the Contract.

The City of Billings shall indemnify, reimburse for defense of, save Contractor losses, damages and expenses arising from any wrongful or negligent act, error or omission of the City of Billings or any agent, employee or subcontractor as a result of the City of Billings's or any subcontractor's performance pursuant to this Contract.

- B. The City of Billings shall not indemnify, defend, save and hold Contractor harmless from claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses or attorneys' fees and costs arising from wrongful or negligent acts, error or omission solely of the Contractor occurring during the course of or as a result of the performance of the Contract.

Where claims, lawsuits or liability, including attorneys' fees and costs arise from wrongful or negligent act of both Billings and the Contractor, the Contractor shall indemnify,

reimburse the defense of, save, and hold Billings harmless from only that portion of claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including attorneys' fees and costs, which result from the Contractor's or any subcontractor's wrongful or negligent acts occurring as a result from the Contractor's performance pursuant to this Contract.

Section 10. Inspection and Retention of Records.

The Contractor shall, at any time during normal business hours and as often as Billings may deem necessary, make available to Billings, for examination, all of its records with respect to all matters covered by this Contract for a period ending three years after the date the Contractor is to complete performance in accordance with Section 2 of the Special Provisions. Upon request, and within a reasonable time, the Contractor shall submit such other information and reports relating to its activities under this Contract, to Billings, in such form and at such times as Billings may reasonably require. The Contractor shall permit Billings to audit, examine such records, and to make audits of all invoices, materials, records of personnel, and other data relating to all matters covered by this Contract. Billings may, at its option, permit the Contractor to submit its records to Billings in lieu of the retention requirements of this Section. Notwithstanding anything herein to the contrary, in no event shall Billings be entitled to audit the composition of any agreed upon fixed rates or charges or percentage multipliers set forth in the Contract or any Appendix or exhibit thereto nor shall it be entitled to audit any rates, charges, costs, total hours worked or expenses related to services performed on a lump sum or fixed price basis.

Section 11. Availability of Funds.

Payments under this Contract may require funds from future appropriations. If sufficient funds are not appropriated for payments required under this Contract, this Contract shall terminate without penalty to Billings; and Billings shall not be obligated to make payments under this Contract beyond those which have previously been appropriated.

Section 12. Liability.

In no event will Contractor be liable for any special, indirect, or consequential damages including, without limitation, damages or losses in the nature of increased Project costs, loss of revenue or profit, lost production, claims by customers or Billings, and/or governmental fines or penalties

Contractor's aggregate liability for all damages connected with its services for the Project not excluding by the preceding subparagraph, will not exceed the amount paid to Contractor under this Contract.

IN WITNESS WHEREOF, the parties have executed this Contract on the date and at the place shown below.

City of Billings

Contractor

\_\_\_\_\_  
City Council or Designee

\_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

ATTEST:

IRS Tax ID # \_\_\_\_\_

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

Date: \_\_\_\_\_

By \_\_\_\_\_

BRENT BROOKS, City Attorney

STATE OF MONTANA            )  
  :ss.  
COUNTY OF YELLOWSTONE    )

On this \_\_\_\_ day of \_\_\_\_\_, 2019, before me, the undersigned, a Notary Public for the State of Montana, personally appeared \_\_\_\_\_, known to me to be the \_\_\_\_\_ of \_\_\_\_\_, and acknowledged to me that they executed the foregoing instrument on behalf of said corporation having first been authorized to do so.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year first above written.

\_\_\_\_\_  
Notary Public for the State of Montana  
Residing at Billings, Montana  
My Commission Expires: \_\_\_\_\_

## Appendix A

### Basic Services of Engineer City of Billings W.O. 19-42, West End Water Treatment Plant Project

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#### Section 1. Engineer's Rights and Duties.

- A. To furnish labor, materials, equipment, supplies, and incidentals necessary to conduct and complete the Engineer's portion of the project as defined in the scope of work and to prepare and deliver to Billings all plans, specifications, bid documents, and other material as designated herein.
- B. Ascertain such information as may have a bearing on the work from local units of government, utility companies, and private organizations and shall be authorized to procure information from other authorities besides Billings, but shall keep Billings advised as to the extent of these contacts and the results thereof.
- C. Prepare and present such information as may be pertinent and necessary in order for Billings to pass critical judgment on the features of the work. The Engineer shall make changes, amendments or revisions in the detail of the work as may be required by Billings. When alternates are being considered, Billings shall have the right of selection.
- D. Engineer's work shall be in accordance with the standards of sound engineering and present City, State, and National standards and policies currently in use.
- E. Conform to the requirements of the Montana Code Annotated Title 18 "Public Contracts" and more particularly Sections 18-2-121 and 18-2-122, and all other codes of the State of Montana applicable to providing professional services including codes and standards nationally recognized.
- F. The Engineer shall provide a professional engineer's stamp with the submission of final plans that the plans are in conformance with applicable sections of Title 69, Chapter 4, Part 5, of the Montana Code Annotated as pertaining to existing utilities.
- G. To perform professional services in connection with the project and will serve as Billings' representative in those phases of the project to which this agreement applies.
- H. Submit an estimated progress schedule as to time and costs at the beginning of the work, and monthly progress reports thereafter until complete. The reports will include any problems, potential problems, and delays as foreseen by the Engineer. Reports will be submitted in a timely manner to permit prompt resolution of problems.
- I. Name a Task Director who shall be the liaison between Billings and the Engineer. For this project the Task Director designated for the Engineer is Jason Schaefer working under the Principal-in-Charge, Daniel Korinek.

## Section 2. Billings Rights and Duties.

- A. To furnish all labor, materials, equipment, supplies, and incidentals necessary to conduct and complete Billings' portion of the project as designated in the scope of work.
- B. Name a Task Director who shall be the liaison between the Engineer and Billings. For this project, the Task Director designated is Randy Straus, working under the City Engineer, Debi Meling.

## Section 3. Scope of Work.

### TASK SERIES 100 – Meetings and Project Management

#### Task 101 –Project Kickoff Meeting:

The Burns & McDonnell project team will 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:

- Present project background.
- Introduce key staff involved in the project including City personnel who are to provide information/services.
- Determine lines of communication and project contacts (contact list to be developed).
- Identify available existing data and exchange.
- Discuss key issues and goals.
- Review the project schedule and milestones.
- Outline possible community concerns, neighboring residents, businesses, easements, etc.
- Discuss overall project scope of work.

#### Task 102 –Monthly Progress Meetings:

The Burns & McDonnell project team will prepare for, attend, and conduct monthly progress meetings. These meeting will be held at the City's offices. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail. When workshops and kickoff meeting coincide with monthly progress meetings the meetings will be combined. Assumes 6 months of meetings. Meetings will normally be held at the Public Works Conference Room. Regular workshop attendees will include the PM and a process engineer. Other resources will participate as part of a virtual meeting.

#### Task 103 –Bi-Monthly Management Meetings:

The Burns & McDonnell project team will prepare for, attend, and conduct bi-monthly management meetings. These meeting will be held at the City's offices. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail. Assumes 8 months of meetings (4 total meetings). When possible, these meetings will be conducted on the same day as progress meetings and/or workshops in order to minimize travel expenses.

#### Task 104 – Monthly Status Report Submittals:

The Burns & McDonnell project team will utilize the monthly invoicing format provided by the

City of Billings and supplement its monthly status report as necessary to include the following items:

- Budget Tracking
- Scope of work completed the prior month
- Activities projected for next month
- Potential concerns
- Schedule update

Task 105 – Regulatory Support:

The Burns & McDonnell project team will work with DEQ to coordinate proposed and selected treatment alternatives. Our team will also determine if DEQ will require any pilot testing is required for any of the treatment processes. The Burns & McDonnell project team will develop an overall permitting matrix for the project.

Task 106 – Project Management:

Project management for the Basis of Design phase include all project coordination between the City and the consultant team members. The project manager will monitor project status, monitor project schedule, monitor project deliverables and coordinate resources including sub-consultants. The task also includes an internal bi-weekly progress meeting.

**TASK SERIES 200 – WATER QUALITY CHARACTERIZATION**

Task 201 – Review Existing Water Quality:

The City will provide available water quality data from the Yellowstone River in electronic format and through monthly operating reports. The Burns & McDonnell project team will import this data into the raw water quality model. The raw water quality data will be evaluated for all major constituents which would impact the performance of potential processes or finished water goals. This data will include, at a minimum: establishment of boundary conditions for design with consideration of the new reservoirs, evaluation of trends, identification of gaps in water quality needed for design, recommendations for further sampling.

Task 202 –Recommend Additional Water Quality Testing:

The Burns & McDonnell project team will utilize the existing data provided by the City and determine if any additional data is required for a complete analysis of the raw water sources in the above task. A sampling plan will be prepared which identifies constituents to be tested, frequency, location, sampling procedures and standard methods, and recommendations for laboratory turn-around-times. The City will be responsible for sampling, establishing outside laboratory contracts, and obtaining analytical reports. The Burns & McDonnell project team will assist the City during sampling, review reports as they are received, verify results and compile data. These results will be incorporated into the water quality model, and the analyses within Task 201.

Task 203 – Design Water Quality TM Submittal:

The Burns & McDonnell project team will provide a summary of the water quality results and prepare a Draft Technical Memorandum (TM) for City Review. Following the City review, The Burns & McDonnell project team will perform the Design Water Quality TM workshop. Questions, comments, and discussion from the Design Water Quality workshop and City comments from the Draft TM will be incorporated into the final TM. Technical memorandum will be issued via email.

Task 204 – Incorporate City Comments on Water Quality TM:

The Burns & McDonnell project team has allotted two weeks for the City to review the Draft TM. This task is intended to address comments on the draft TM.

Task 205 – Design Water Quality TM Workshop:

The Burns & McDonnell project team will prepare for, attend, and conduct a design water quality review workshop to be held with City staff. The design water quality results shall be presented by the Consultant and reviewed in detail with the City. City staff shall provide written comments to be presented at the review meeting. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

**TASK SERIES 300 – IDENTIFY PROCESS TRAINS**

Task 301 – Identify Process Trains and Residuals Trains

The Burns & McDonnell project team will develop preliminary project design criteria, finished water goals, and develop conceptual primary or liquid stream treatment trains to treat the water sources. In addition, to the process trains, the Burns & McDonnell project team will develop multiple residuals handling trains. Potential interdependencies between residuals handling will be identified. The process trains will be used for discussion at the workshop. A packet will be prepared with train descriptions, tables of design criteria and finished water goals, and conceptual exhibits of the primary and residuals trains for review by the City at the workshop.

Task 302 – Process & Residual Train Workshop:

The Burns & McDonnell project team will prepare for, attend, and conduct a process and dewatering train review workshop to be held with City staff. The packet prepared in Task 301 will be issued one week prior to the workshop. The process and dewatering train options shall be presented by the Consultant and modified as necessary with the City. The purpose of this workshop is to determine all potential trains and cull the list to no more than 3 total trains for forthcoming evaluations. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

Task 303 – Process & Residual Train TM Submittal

The Burns & McDonnell project team will provide a summary of the process and residual train options and prepare a Technical Memorandum (TM). Questions, comments, and discussion from the Process & Dewatering workshop and City comments from the Draft TM will be incorporated into the Final TM. The remaining water quality sampling data will be incorporated to this TM from Task 202, and the water quality characterization model updated.

Task 304 – Incorporate City Comments on Process & Residual Train TM:

The Burns & McDonnell project team has allotted two weeks in the schedule for the City to review the TM. This task is intended to address comments on the draft TM.

**TASK SERIES 400 – DESKTOP TREATMENT TRAIN EVALUATION**

Task 401 – Preparation of Process Selection Tools:

The Burns & McDonnell project team will utilize the process & residuals trains identified in Task 300 to prepare the Process Selection Tool. A draft list of evaluation criteria, and project

design criteria will be prepared for discussion at the Workshop and issued as a packet one week prior to the workshop.

Task 402 – Review Trains & Establish Ranking Workshop:

The Burns & McDonnell project team will prepare for, attend, and conduct a Review Trains & Establish Ranking Workshop to be held with City staff. The review trains & establish ranking workshop shall be an interactive meeting to: review treatment trains selected in previous workshop, confirm final list of evaluation criteria for ranking trains, conduct pair-wise ranking of the evaluation criteria, and conduct weighted ranking of evaluation criteria versus each train. The outcome of this workshop will be a non-monetary ranking of the treatment trains using the Process Selection Tool. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

Task 403 – Construction Costs for Options:

Based on the Process Selection Workshop, our project team will prepare the engineer's opinion of probable cost to populate the life cycle cost model for the top alternatives. Our estimate will be based on recent bid tabulation information, historical cost data, and discussions with local suppliers and contractors. All assumptions will be included for reference. All costs developed at this stage are assumed to be AACE Class 5.

Task 404 – Lifecycle Cost Analysis:

The Burns & McDonnell project team will also develop ownership and maintenance costs associated with the different processes to be utilized for the overall process selection analysis. All costs developed at this stage are assumed to be AACE Class 5.

Task 405 – Treatment Train Evaluation TM Submittal:

The Burns & McDonnell project team will provide a TM detailing the treatment trains, final descriptions, ranking from the above workshops, and lifecycle costs associated with each train. These costs will be submitted along with assumptions made during the analysis. Questions, comments, and discussion from the Treatment Train Evaluation Workshop and City comments from the Draft TM will be incorporated into the final TM.

Task 406 – Incorporate City Comments on Treatment Train Evaluation TM:

The Burns & McDonnell project team has allotted two weeks in the schedule for the City to review the TM. This task is intended to address comments on the draft TM.

Task 407 – Finalize Train Selection Workshop:

The Burns & McDonnell project team will prepare for, attend, and conduct a treatment train selection workshop to be held with City staff. The lifecycle costs will be incorporated into the Process Selection Tool and a cost-benefit analysis conducted on each train, to determine final ranking. In addition, a sensitivity analysis will be conducted on selected criteria. The treatment train to proceed with bench-scale testing and pilot testing will be determined at this meeting. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

**TASK SERIES 500 – BENCH-SCALE TESTING**

Task 501 – Bench-Scale Testing Protocol:

The Burns & McDonnell project team will develop a draft testing plan/protocol for the City's review. The testing protocol will include the operating procedure, testing goals, water quality

sampling and other protocols required during the bench-scale test. Comments from City will be incorporated into the final protocol

Task 502 – Incorporate City Comments on Bench-Scale Testing Protocol:

The Burns & McDonnell project team has allotted two weeks in the schedule for the City to review the Bench-Scale Testing Protocol. This task is intended to address comments on the draft protocol.

Task 503 – Bench-Scale Testing:

The exact bench-scale testing will be determined following the treatment train determination. For example, the Burns & McDonnell project team will perform the following for the different treatment trains:

- Pretreatment – The Burns & McDonnell project team will perform jar tests on alternative coagulants and oxidants. The Burns & McDonnell project team has assumed that this can be accomplished with approx. 20 jar tests.
- Ozone – The Burns & McDonnell project team will determine the feasibility of using ozone for taste and odor control, production of assimilable organic carbon (AOC), treatment process enhancements, and evaluate additional advantages and disadvantages to ozone systems. The ozone testing will be performed with a the Burns & McDonnell project team's ozone generator with flow through columns. The bench scale testing will be conducted in one week with two engineers operating the system with one day to set up the equipment and one day to remove the equipment.
- Biofiltration – Conduct biological filtrations tests at Test America's Applied Science Laboratory in Corvallis, OR. The Burns & McDonnell project team will coordinate biofiltration design with Test America. This task assumes that testing and shipping fee paid directly by the City.
- UV – The Burns & McDonnell project team will send treated water to an equipment vendor to perform the desired UV testing.

Task 504 – Water Quality Analysis Testing:

The Burns & McDonnell project team will perform all of the bench scale testing and data collection with assistance from City staff for the collection of water supply samples and basic laboratory testing on the raw water that can be conducted onsite during testing (turbidity, temperature, color, UVT, pH, hardness, and alkalinity). The Burns & McDonnell project team has assumed that the cost for all lab equipment, consumables and outside water quality laboratory work would be paid by the City.

Task 505 – Bench-Scale Testing TM Submittal:

The Burns & McDonnell project team will provide a summary of the Bench-Scale Testing and prepare a Technical Memorandum (TM). The life cycle cost model and AACE Class 5 cost estimates for the train will be updated for the TM. City comments from the Draft TM will be incorporated into the final TM.

Task 506 – Incorporate City Comments on Bench-Scale Testing TM:

The Burns & McDonnell project team has allotted two weeks in the schedule for the City to review the TM. This task is intended to address comments on the draft TM.

## **TASK 600- PRELIMINARY FIELD SURVEYING**

### Task 601 – Survey

The Burns & McDonnell team will provide a topographical survey of the preferred site for the new water treatment plant. The horizontal and vertical datums for this project shall be approved by the City. Approximately 40 acres will be surveyed on the preferred site. Survey will extend across Hesper Road and South 48<sup>th</sup> Street West.

The survey will also include survey of the Hesper Road corridor from South 40<sup>th</sup> Street West to South 48<sup>th</sup> Street West for extension of utilities to the preferred site (e.g. sanitary sewer, etc.).

Survey will include utility locations as located by Montana One Call and applicable public/private utilities, property lines, structures, and all other information needed for design of the new water treatment plant. Utility locator markings and visible property corners along the route will be surveyed in the proposed survey area.

Survey of the raw water pump station site and intake site is not included in the scope. Data from the reservoir project will be utilized for the topography and utility information required for preliminary design. Additional survey of this area will be performed to confirm the survey matches our datum during detailed design.

### Task 602 - Geotechnical Investigations

The geotechnical investigations shall consist of drilling a total of sixteen (16) exploratory borings at the water treatment facility and pump station site and raw water intake and pump station site. All borings shall be drilled to a depth of 20 to 30 feet. A total of four (4) of the borings will be located at the raw water pump station and intake in which the location will be determined at a later date. Four (4) borings shall be drilled to a minimum depth of 40 feet or top of competent bedrock or as required to adequately determine and delineate the soil strata. A report will be prepared to provide identification, sample and test soils encountered, discuss geotechnical design and construction concerns, take ground water depth measurements, and provide geotechnical design criteria. Testing for contaminated soils or water are not included in this investigation.

### Task 603 - Utility Potholing

The extent of potholing will be determined during the project and paid from a contract allowance of \$10,000.

### Task 604 - Deliverables

Provide survey mapping to be utilized for design (one-foot contours).  
Provide existing utilities information for inclusion in final design drawings.  
Provide a report summarizing the geotechnical information.

## **TASK SERIES 700 – HYDRAULIC ANALYSIS**

### Task 701 – Raw Water Intake Evaluation

Burns & McDonnell's Project Team will provide an evaluation of the raw water intake options and prepare a Technical Memorandum (TM). Questions, comments, and discussion from the Hydraulic Analysis workshop and City comments from the Draft TM will be incorporated into the Final TM.

### Task 702 – Hydraulic Modeling

Burns & McDonnell's Project Team will provide an analysis of the transmission and distribution systems (focused on Pressure Zones 3 and 2) using the City's most recent 2019 update of its hydraulic model and prepare a Technical Memorandum (TM). Questions, comments, and discussion from the hydraulic analysis workshop and City comments from the Draft TM will be incorporated into the Final TM. This will help identify sizing of the high service pump station in addition to location and sizing of the water transmission main leaving the high service pump station.

The steady state model will analyze initial design capacity (20 MGD) and future design capacity (40 MGD). The basis of the hydraulic model will be the City's most recent 2019 update of its existing model.

Current and future demands will be provided by the City from current master planning efforts. This analysis will match years evaluated in the ongoing master plan. Recent projects will be provided by the City for updating missing infrastructure in the model.

### Task 703 – Raw Water Pump Station Evaluation

Burns & McDonnell's Project Team will provide an evaluation of the raw water pump station options and prepare a Technical Memorandum (TM). Questions, comments, and discussion from the hydraulic analysis workshop and City comments from the Draft TM will be incorporated into the Final TM. Analysis will include pump types, preferred pump manufacturers, pump head and discharge characteristics, and layout options.

### Task 704 – High Service Pump Station Evaluation

Burns & McDonnell's Project Team will provide an evaluation of the high service pump station options and prepare a TM. Questions, comments, and discussion from the hydraulic analysis workshop and City comments from the Draft TM will be incorporated into the Final TM. Analysis will include pump types, preferred pump manufacturers, layout options, pump head and discharge characteristics, and pumping to Zone 3 or both Zone 3 and Zone 2.

### Task 705 – Surge Modeling and Analysis

Burns & McDonnell's Project Team will provide a surge analysis (aka transient analysis) of the transmission main exiting the new water treatment plant and prepare a Technical Memorandum (TM). Questions, comments, and discussion from the hydraulic analysis workshop and City comments from the Draft TM will be incorporated into the Final TM. This task will analyze scenarios to determine the impacts of high and low pressures within the distribution system due to surge events. The surge model will analyze initial design capacity (20 MGD) and future design capacity (40 MGD). The basis of the surge model build will be the City's most recent 2019 update of its existing model. Current and future demands will be provided by the City from current master planning efforts.

### Task 706 – Finalize Hydraulic Analysis Workshop:

Burns & McDonnell's Project Team will prepare for, attend, and conduct a hydraulic analysis workshop to be held with City staff. The Hydraulic Analysis workshop will include discussion of the raw water intake, hydraulic analysis, raw water pump station, high service pump station, and surge analysis. Burns & McDonnell's Project Team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

## TASK SERIES 800- PRELIMINARY DESIGN REPORT

### Task 801 – Develop and Submit Operations Questionnaire:

The Burns & McDonnell project team will develop an operator questionnaire that will include questions regarding the future design requirements and/or equipment preferences. The Burns & McDonnell project team will submit this questionnaire to a list of applicable staff as provided by the City to collect preferences and requirements on all treatment, process equipment, electrical equipment, SCADA equipment, lab requirements, operations center, maintenance/storage requirements, administration spaces, etc. All of this information will be documented and included in the preliminary design report.

### Task 802 – Water Treatment Plant Tours:

The Burns & McDonnell project team will host a two-day tour of multiple water treatment plant tours in the Denver Metro Area. The intent of the tours will be to collect preference/like/dislikes of existing water treatment facilities. In addition, the tours will provide the opportunity for the City staff to hear preferences of other municipalities. This information will be documented and included in the preliminary design report. The Burns & McDonnell project team includes cost and time for their staff, but has not included any cost for City staff to attend.

### Task 803 – Preliminary Design Report Submittal:

The Burns & McDonnell project team will develop a complete preliminary design report (PDR) that will include the following items for the intake, raw water pump station, water treatment plant, and high service pump station: raw water quality, finished water quality goals, process selection, bench testing results, preference developed in Task 701 & 702, site development, treatment process design, architectural, structural, mechanical, electrical, instrumentation & control, capital cost estimates, operational cost estimates, survey, geotechnical report, schedule, and phasing.

### Task 804 – Incorporate City Comments on Preliminary Design Report (PDR):

The Burns & McDonnell project team has allotted two weeks for the City to review the Draft PDR. This task is intended to address comments on the draft PDR.

### Task 805 – PDR Workshop:

The Burns & McDonnell project team will prepare for, attend, and conduct a preliminary design report workshop to be held with City staff. The PDR shall be presented by The Burns & McDonnell project team and reviewed in detail with the City. City staff shall provide written comments to be presented at the review meeting. The Burns & McDonnell project team will provide meeting minutes with a decision log and a list of action items. Meeting minutes will be distributed via e-mail.

### Future Tasks

Scope items to be added by future amendment include but are not limited to:

- Design services
- Bidding services
- Construction services
- Startup and training services
- SCADA programming services

Warranty services

## Appendix B

### Methods and Times of Payment City of Billings W.O. 19-42, West End Water Treatment Plant Project

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#### Section 1. Payments for Basic Services.

Billings shall authorize payment to the Engineer for services performed under Appendix A of this Agreement. Partial payment shall be due the Engineer upon receipt of the Engineer's pay estimate, said estimate being proportioned to the work completed by the Engineer.

Partial payment shall be made to the Engineer upon receipt of the Engineer's pay estimate, said estimate being proportioned to the work completed by the Engineer. Billings shall deduct five percent (5%) from each monthly pay estimate to be held until the completion of the final scope of work. The final payment shall be made only after acceptance of final documents by Billings, and determination that the scope of work has been satisfactorily completed.

- A. For services rendered prior to construction, Appendix A, the Engineer shall be paid based upon actual time accrued, but not to exceed Eight Hundred Eighty Three Thousand Seven Hundred Thirty Two and No/100 Dollars (\$883,732.00).
- B. Final payment shall be the above stated basic fee less all previous payments.

#### Section 2. Payments for Extra Services when Authorized by Billings.

Requests made or conditions identified by interested groups at the agency or public meetings, which are beyond the scope and intent of this project shall be paid for on an hourly basis at the applicable fees in Appendix D.

#### Section 3. Corrections.

Costs of Billings work that is required for corrections to the Engineer's work which requires redoing by Billings shall be deducted from any payments due the Engineer, if the Engineer fails to make the required corrections.

#### Section 4. Fee Increases

For contracts and services that are expected to require more than one (1) year to complete, the above stated basic services payments may be reviewed and adjusted annually by mutual agreement of the parties, based upon documented evidence that the Engineer's costs and hourly rates as shown in Appendix D have increased for all comparable clients.

## **Appendix C**

### **Additional Services of Engineer City of Billings W.O. 19-42, West End Water Treatment Plant Project**

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Extra Services of the Engineer will be paid only with written prior authorization by Billings.

- A. Requests made or conditions identified by interested groups at the agency or public meetings, which are beyond the scope and intent of this study.

## **Appendix D**

### **Schedule of Professional Fees City of Billings W.O. 19-42, West End Water Treatment Plant Project**

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Not used in this contract.

## **Appendix E**

### **Project Schedule**

#### **City of Billings W.O. 19-42, West End Water Treatment Plant Project**

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Based on a notice to proceed by Billings date no later than August 13, 2019, the completion date for the Engineer's work shall be on or before December 31, 2020.

Delays affecting the completion of the work within the time specified of more than ninety (90) days, not attributable to or caused by the Parties hereto, may be considered as cause for the renegotiation or termination of this Contract.

If the Engineer is behind on this Contract due to no fault of Billings, then the Engineer hereby acknowledges the right of Billings to withhold future Contracts to the Engineer in addition to any other remedy until this Contract is brought back on schedule or otherwise resolved.

## Appendix F

### **Certificate(s) of Insurance City of Billings W.O. 19-42, West End Water Treatment Plant Project**

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(Attach Certificate(s) of Insurance)