

Contract for Professional Engineering Services

City of Billings W.O. 14-01--Schedule 1 WATER MAIN REPLACEMENT

In consideration of the mutual promises herein, City of Billings and Sanderson Stewart 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 10 pages (Basic Services of Engineer);
- Appendix B consisting of 1 page (Methods and Times of Payment);
- Appendix C consisting of 1 page (Additional Services of Engineer);
- Appendix D consisting of 3 pages (Schedule of Professional Fees);
- Appendix E consisting of 1 page (Project Schedule);
- Appendix F consisting of 5 pages (Certificate(s) of Insurance)

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 the designee.
- B. "Billings" means the City of Billings.
- C. "Engineer" means Sanderson Stewart.
- D. "Contractor" means the third party responsible for the physical construction of the project.

Section 2. Scope of Services.

- A. The Engineer 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 Engineer 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 Engineer may provide, at its own expense, any other services that are consistent with this Contract.

- D. The Engineer shall provide as-built drawings as specified hereafter, 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 as-built drawings are received by the City of Billings.
- E. ~~The Engineer shall provide certified construction payrolls to the Administrator stating in writing that the payrolls have been reviewed and are acceptable.~~

Section 3. Time for Performance.

- A. This Contract becomes effective when signed on behalf of Billings.
- B. The Engineer 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, 2014.

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 Engineer 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 Engineer's performance is unsatisfactory, the Administrator must, within ten (10) days of the payment denial, notify the Engineer of the payment denial and set forth, with reasonable specificity, what was unsatisfactory and why. Billings will pay Engineer within 30 days of receiving an acceptable invoice.
- B. The Engineer 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 Engineer shall have paid all City taxes currently due and owing by the Engineer.

Section 5. Termination of the Engineer's Services.

The Engineer'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 Engineer 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 Engineer's services for convenience, Billings shall pay the Engineer 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 Engineer shall become the property of Billings.

- B. If the Engineer's services are terminated for cause, Billings shall pay the Engineer the reasonable value of the services satisfactorily rendered prior to termination, less any damages suffered by Billings because of the Engineer'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 Engineer under this Contract shall become the property of Billings at its option.
- C. If the Engineer 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 Engineer shall not be entitled to any compensation under this Section until the Engineer has delivered to the Administrator all documents, records, Work product, materials and equipment owned by Billings and requested by the Administrator.
- E. If the Engineer's services are terminated for whatever reason the Engineer 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 Engineer'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 Engineer'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 Engineer shall maintain in good standing the insurance described in Subsection B of this Section. Before rendering any services under this Contract, the Engineer shall furnish the Administrator with proof of insurance in accordance with Subsection B of this Section.
- B. The Engineer shall provide the following insurance:
 - 1. Workers' compensation and employer's liability coverage as required by Montana law.
 - 2. Commercial general liability, including contractual and personal injury coverage's -- \$1,500,000 per occurrence.
 - 3. Commercial automobile liability -- \$1,500,000 per accident.
 - 4. Professional liability in the amount of \$1,500,000 per occurrence.
- 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 listed 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.

Section 8. Assignments.

Unless otherwise allowed by this Contract or in writing by the Administrator, any assignment by the Engineer 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 Engineer 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.

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

- A. Except as otherwise provided herein, all data, documents and materials produced by the Engineer 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. The engineer shall retain rights to pre-existing proprietary property including but not limited to interactive models. The Engineer shall have the right to include photographic or artistic representations of the design and construction of the Project among the Engineer's promotional and professional materials. The Engineer's materials shall not include Billings' confidential or proprietary information regardless of whether Billings has previously advised the Engineer in writing of the specific information considered by Billings to be confidential and proprietary.
- B. Equipment purchased by the Engineer with Contract funds: See Appendix A, Section 3. Scope of Work.
- C. Should Billings elect to reuse Work products provided under this Contract for other than the original project and/or purpose, Billings will indemnify and hold harmless the Engineer 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 work product provided under this Contract must be limited to conceptual or preliminary use for adaptation, and the original Engineer's or subcontractor's signature, professional seals and dates removed. Such reuse of work product, 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: City Engineer (Debi Meling, PE)
City of Billings
Public Works Department
2224 Montana Avenue
Billings, Montana 59101 FAX: (406) 237-6291 / PHONE : (406) 657-3097

Engineer: Sanderson Stewart
Rick Leuthold, PE, Chairman
1300 North Transtech Way
Billings, Montana 59102 FAX: (406) 656-0967 / PHONE: (406) 656-5255

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 Engineer 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 Engineer 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 Engineer'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 Engineer;
- G. Provides accounting records supported by source documentation; and

- H. Provides a systematic method assuring 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 Engineer agrees to abide by those additional requirements immediately upon receipt of written notice thereof from Billings.

Section 15. Subcontracts.

The Engineer 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 Engineer delegates the provision of services shall be subject to review and approval by the Administrator before it is executed by the Engineer.
- 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.

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PART II
GENERAL CONTRACT PROVISIONS

Section 1. Relationship of Parties.

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

Section 2. Nondiscrimination.

- A. The Engineer 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 Engineer will take affirmative action to ensure 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 Engineer 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 Engineer 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 Engineer shall comply with any and all reporting requirements that may apply to it which the City of Billings may establish by regulation.
- D. The Engineer 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 Engineer under this Contract.
- E. The Engineer shall comply with all applicable federal, state, and city laws concerning the prohibition of discrimination.

Section 3. Permits, Laws, and Taxes.

The Engineer shall acquire and maintain in good standing all permits, licenses and other entitlements necessary to its performance under this Contract. All actions taken by the Engineer under this Contract shall comply with all applicable statutes, ordinances, rules and regulations. The Engineer shall pay all 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:

Engineer: Rick Leuthold, PE, Chairman
(title of position)

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 arising 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.

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 Engineer shall indemnify, defend, save, and hold Billings harmless from any and all claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including reasonable attorneys' fees and costs, arising from any wrongful or negligent act, error or omission of the Engineer or any agent, employee or subcontractor as a result of the Engineer's or any subcontractor's performance pursuant to this Contract.

- A. The Engineer 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.
- B. Where claims, lawsuits or liability, including attorneys' fees and costs arise from wrongful or negligent act of both Billings and the Engineer, the Engineer shall indemnify, defend, 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 Engineer's or any subcontractor's wrongful or negligent acts occurring as a result from the Engineer's performance pursuant to this Contract.

Billings shall indemnify, defend, save, and hold the Engineer harmless from any and all claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including reasonable attorneys' fees and costs, arising from any wrongful or negligent act, error or omission of Billings or any agent, employee or subcontractor as a result of Billings' or any subcontractor's performance pursuant to this Contract.

- A. Billings shall not indemnify, defend, save and hold the Engineer 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 Engineer occurring during the course of or as a result of the performance of the Contract.
- B. Where claims, lawsuits or liability, including attorneys' fees and costs arise from wrongful or negligent act of both Billings and the Engineer, Billings shall indemnify, defend, save, and hold the Engineer 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 Billings' or any subcontractor's wrongful or negligent acts occurring as a result from Billings' performance pursuant to this Contract.

Section 10. Inspection and Retention of Records.

The Engineer 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 Engineer is to complete performance in accordance with Section 2 of the Special Provisions. Upon request, and within a reasonable time, the Engineer 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 Engineer shall permit Billings to audit, examine and make copies of such records, and to make audits of all invoices, materials, payrolls, records of personnel, and other data relating to all matters covered by this Contract. Billings may, at its option, permit the Engineer to submit its records to Billings in lieu of the retention requirements of this Section.

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.

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

City of Billings

Engineer

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)

COUNTY OF YELLOWSTONE)
ss.

On this _____ day of _____, 2013, 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: _____

Note: Final contract documents will require the Engineer's signature to be notarized.

Appendix A

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Basic Services of Engineer W.O. 14-01, Schedule 1 - Water Main Replacement

Section 1. Engineer's Rights and Duties.

- A. To furnish all 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 certify 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. Where Federal funds are involved, the necessary provisions to meet all requirements will be complied with and documents secured and placed in the bidding documents.
- I. 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.

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- ~~J. Contract administration duties will include review of contractor certified payrolls for wage rate compliance. Discrepancies in certified payrolls will be resolved with the Contractor. A signed Engineer's Payroll Check Sheet (included in the Standard Modifications to MPWSS) will be submitted as proof of this review with one copy of each payroll.~~
- K. 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 Mac Fogelsong, PE working under the Principal-in-Charge, Dennis Randall, PE.

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, PE working under the City Engineer, Debi Meling, PE.

Section 3. Scope of Work.

SCOPE OF WORK:

The scope of work covered by this agreement is described hereafter:

The project consists of the design and bidding services for the W.O. 14-01, Schedule 1 - Water Main Replacement which includes water mains in North 27th Street between Montana Avenue and 6th Avenue North, and the water mains in Grand Avenue between 17th Street West and 24th Street West. Professional services include design of water main replacement, preparation of contract plans and specifications, contract plan and specification interpretation during construction, review of contractor pay estimates, construction staking, and inspection of construction for these water mains more specifically described below. Engineer will coordinate work efforts with other related improvement projects expected to be completed concurrently in the project area.

Phase 100. Project Initiation

- Task 1. Attend meeting with City officials to determine project scope.
- Task 2. Review available information and studies.
- Task 3. Review routes in field walkthrough.
- Task 4. Discuss design basis with the City.

Phase 200. Preliminary Design Services

- Task 1. Project management and coordination
- Task 2. Review alignments with respect to other utilities.
- Task 3. Review existing as-built drawings.
- Task 4. Review work done to date and determine problems with preliminary alignment.

- Task 5. Research existing City, County, State, and Federal studies and reports to determine potential conflicts.
- Task 6. Based on selected City-performed hydrant flow tests, review pipe sizes and/or hydrant lead sizes. Review City master plan for hydrant deficiencies in the project area that may affect design pipe size(s).
- Task 7. Determine locations where additional right-of-way must be secured and coordinate obtaining necessary construction permits if any.
- Task 8. Review existing valve operation near critical intersections to determine if certain valves require replacement. Estimate, based on valve operation, if Contractor will likely experience significant water flows during construction and present information in bidding documents based on findings. City of Billings shall operate all valves.
- Task 9. Assemble existing available plat, certificate of survey, easement and ownership information along the chosen alignment and draw in existing parcels from plats and field survey.
- Task 10. Attend up to six periodic design review meetings with the City and two design review meetings with MDOT personnel (for N. 27th St)
- Task 11. Obtain field location of existing utilities and incorporate this information into the construction plans. Utility locates will be requested for the project corridor using the One-Call service and surveyed for the corridor selected by the City.
- Task 12. Perform survey measure downs for existing water, sewer, and storm for North 27th Street from Montana Avenue to 6th Avenue North. Traffic control included for items out in traffic areas.
- Task 13. Perform survey measure downs for existing water, sewer and storm for Grand Avenue from 17th Street West to 24th Street West. Traffic control included for items out in traffic areas.
- Task 14. Set control network for North 27th Street and Grand Avenue areas.
- Task 15. Property corner search for North 27th Street.
- Task 16. Property corner search for Grand Avenue.
- Task 17. Field topographic survey of North 27th Street from Montana Avenue to 6th Avenue North. Topographic survey includes up to 4 days of traffic control set-up.
- Task 18. Field topographic survey of Grand Avenue from 17th Street West to 24th Street West. Topographic survey includes up to 5 days of traffic control set-up.
- Task 19. Geotechnical Investigation of North 27th Street (Montana Ave-6th Ave N.): Begin geotechnical investigation based on alignment as

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selected by the City. Geotechnical engineering shall include field sampling, laboratory testing and review of subsurface soils to determine appropriate pavement section design alternatives, subgrade treatment, groundwater conditions, and foundations for utility installations. Recommendations for specific construction materials and groundwater management established in this review will be included in the project plans and specifications. Shallow asphalt cores shall be taken mid-block to determine street section thicknesses between regular "deep" borings. Geotechnical investigation includes traffic control during boring operations.

- Task 20. Geotechnical Investigation of Grand Avenue (17th-24th St W): Begin geotechnical investigation based on alignment as selected by the City. Geotechnical engineering shall include field sampling, laboratory testing and review of subsurface soils to determine appropriate pavement section design alternatives, subgrade treatment, groundwater conditions, and foundations for utility installations. Recommendations associated with pipe bursting 12-inch to 12-inch in Grand Avenue. Recommendations for specific construction materials and groundwater management established in this review will be included in the project plans and specifications. Shallow asphalt cores shall be taken mid-block to determine street section thicknesses between regular "deep" borings. Geotechnical investigation includes traffic control during boring operations.
- Task 21. Miscellaneous geotechnical design review, including geotechnical review of plans and specifications and review of adjacent pipeline/utility stability.
- Task 22. Perform literature review of documented environmental issues (preliminary site analysis) of the North 27th Street area and the Grand Avenue area. No in-field drilling, testing, or environmental sampling is included in this literature review.
- Task 23. Review pipe bursting as alternate construction method for Grand Avenue area including fusible PVC pipe.
- Task 24. Review alternate construction timing methods for Grand Avenue (review of night work/weekend work, 24 hour 7-day a week work hours). Include findings in memorandum with alternate construction methods from Task 23.
- Task 25. Traffic Analysis of North 27th Street (Montana Ave-6th Ave N): Begin analysis and data collection of traffic and related issues to determine if they affect alignment or other design factors. Data collection for up to six (6) impacted intersections in one peak hour (AM or PM).
- Task 26. Traffic Analysis of Grand Avenue (17th-24th St W): Begin analysis and data collection of traffic and related issues to determine if they affect alignment or other design factors. Data collection for

up to three (3) impacted intersections in one peak hour (AM or PM).

- Task 27. Design of temporary water system performance specifications for all project areas and flushing design for any 24-inch diameter water main piping.
- Task 28. Design of temporary private fire suppression system performance specifications as required during construction. Meet with City of Billings Fire Marshall to review affected buildings with fire suppression requirements.
- Task 29. Meet with local contractors and suppliers to discuss constructability and traffic control issues.
- Task 30. Identify potential staging areas, disruptions to private access and parking.
- Task 31. Develop a public involvement plan which shall include an educational outreach component and two (2) public informational meetings for each area (total of four (4) meetings). Meet with affected businesses and present results and provide design charette at two of said business meetings.
- Task 32. Coordinate the identification and potential relocation of private utilities including, overhead and underground power, cable TV, underground telephone and communications, petroleum oil, and natural gas.
- Task 33. Send preliminary construction plans to the private utilities for review and comment, and hold subsequent coordination meetings with the private utilities to assemble and evaluate comments (up to three (3) meetings).
- Task 34. Identify areas to perform subsurface utility "potholing" at identified pipe line or utility crossings to identify specific pipe elevations or private utility locations. Survey said pipe elevations in the field for incorporation into the design. Scope of work assumes Sanderson Stewart will provide a "vacuum" truck via subcontract to remove material in order to survey said utilities. Scope of work includes up to four (4) full 8-hour days of subcontract "potholing". Temporarily backfill holes with cold-mix asphalt. Provide filling of holes during construction by Contractor with hot-mix asphalt. Scope of work includes traffic control.
- Task 35. Meet with Montana Rail Link officials to review impacts of traffic backing up at the railroad crossing north of the North 27th Street/Montana Avenue intersection.
- Task 36. Meet with City engineering, and public utilities department (PUD) two times.
- Task 37. Prepare preliminary traffic control plans and specifications for the North 27th Street project area and submit for review by the City of Billings and MDOT. Coordinate with other City construction

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projects known in the vicinity of this project.

- Task 38. Prepare preliminary traffic control plans and specifications for the Grand Avenue project area and submit for review by the City of Billings. Coordinate with other City construction projects known in the vicinity of this project.
- Task 39. Quality control review of plans.
- Task 40. Prepare Preliminary Plans and Specifications (70% design level) using all data gathered and input received.
- Task 41. Prepare opinion of probable cost with 15 percent contingency included.
- Task 42. Submit Preliminary Plans and Specifications (70% design level) for review to all interested parties as determined by the City of Billings and Sanderson Stewart, including MDOT (for N. 27th St).

Phase 200 Deliverables:

Memorandum Discussing Construction Alternate and Scheduling Alternates for Grand Avenue project area, Preliminary Geotechnical Report, Preliminary Alignment and Grade Plans (70%), Preliminary Opinion of Probable Cost with 15% contingency; Deliverables include up to five (5) sets of 24x36-inch size preliminary plans and specifications.

Phase 300. Final Design and Bidding Services

- Task 1. Project management, and coordination.
- Task 2. Assemble all preliminary plan review comments and redlines for incorporation into final plans.
- Task 3. Match street restoration grades with proposed development in adjacent properties as required. Design new ADA Ramps where required (Up to 8 ramps).
- Task 4. Coordinate final design with other public utilities within the selected project corridor.
- Task 5. Incorporate recommendations of geotechnical report into final plans and specifications, including the QA/QC recommendations for materials testing during construction.
- Task 6. Prepare erosion control plan and Stormwater Prevention and Pollution Plan (SWPPP) for State permit. Contractor shall pay permit fee direct to the State of Montana and sign Notice of Intent once construction begins.
- Task 7. North 27th Street: Incorporate recommended traffic control plans into final plan set. Plans shall include required detours, required signing, and applicable construction phasing.
- Task 8. Grand Avenue: Incorporate recommended traffic control plans into final plan set. Plans shall include required detours, required signing, and applicable construction phasing.

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- Task 9. Complete final plan and specification sets for submittal, review, and approval by the City of Billings and the Department of Environmental Quality. The City shall pay DEQ review fees direct to DEQ (fees not included in this contract).
- Task 10. Apply for all permits, licenses, and approvals necessary to construct the project.
- Task 11. Submittal of two (2) copies of the project specifications, two (2) half-size plan sets, contract-bidding documents, design report and certified water and sewer checklist to Montana Department of Environmental Quality (MDEQ) for approval.
- Task 12. Receive final redline comments from the City and the Department of Environmental Quality and incorporate said comments in final plans and specifications. Final plans and specifications will be prepared in accordance with the Montana Public Works Standard Specifications, Sixth Edition, April 2010 and the current adopted City of Billings Standard Modifications to the Sixth Ed. Stamp and sign all plans and specifications with seal of Professional Engineer in charge.
- Task 13. Calculate bid quantities and prepare bid proposal and contract documents. Update Engineer's Opinion of Probable cost based upon final plan quantities.
- Task 14. Assist in preparation of bid advertisement and provide documents to prospective bidders and suppliers. Bid advertisement text will be provided to the City for publication.
- Task 15. Attend pre-bid meeting.
- Task 16. Answer bid questions and issue addendums as required.
- Task 17. Attend bid opening, tabulate bids, and make recommendation to the City for award.
- Task 18. Assist in City procurement of final contract agreement, verification of insurance and bonds, and issue notice to proceed.
- Task 19. Quality control review.

Phase 300 Deliverables:

Plans and specifications for review and bidding, Final Opinion of Probable Cost, Bid Tabulations, and Recommendation of Award.

Phase 400. Construction Services and Contract Administration

- Task 1. Project management and coordination.
- Task 2. Schedule and conduct pre-construction conference prior commencement of work at the site. Issue pre-construction meeting minutes to Contractor and City.
- Task 3. Implement and coordinate QA/QC testing program for materials

testing developed in the design phase of the project.

- Task 4. Take preconstruction photos of proposed work areas.
- Task 5. Prepare weekly website informational update content for distribution to the City of Billings. The City will utilize its own website but will require regular informational updates prepared by Engineer to incorporate into the website.
- Task 6. Review Contractor shop drawing submittals in conformance with the information given in contract documents. Also review valve requests and temporary water plans. Review does not include review of any dewatering plans, shall not extend to Contractor means, methods, techniques, sequences, or procedures of construction or Contractor safety programs.
- Task 7. Attend weekly construction meetings during construction. Attend up to two weekly meeting with two construction contracts.
- Task 8. Make visits to the site at intervals appropriate to various stages of construction to observe as an experienced and qualified design professional the progress of the Contractor's executed work. Visits by Engineer shall be limited to spot checking and similar methods of general observation of the work as assisted by the Resident Project Representative.
- Task 9. Scheduled regular business meetings (weekly). Provide up to 1.5 hours per week for two meetings for 2 contracts for a 120-day construction contract.
- Task 10. Attend random business/public meetings during construction.
- Task 11. Respond to Contractor requests for information. Issue necessary clarifications and interpretations of the Contract Documents as appropriate consistent with the intent and reasonably inferable from the Contract Documents. Engineer may issue Field Orders authorizing minor variations in the Work from the requirements of the Contract Documents.
- Task 12. Recommend and prepare Change Orders and Work Change Directives to City as appropriate.
- Task 13. Establish schedules, chain-of-command, and communication priorities for all parties involved in construction.
- Task 14. Provide field staking to give the Contractor measurements, lines, locations, and grades necessary for construction. Field staking shall include grade stakes or slope stakes for excavation and fill, subgrade bluetops (if requested), base gravel bluetops (if required), off-sets and grades for the water main and appurtenances thereto, off-sets and grades for manholes and inlets, off-sets for curb and gutter, and miscellaneous concrete replacement (if required).

- Task 15. Coordinate and schedule quality control testing during all phases of construction.
- Task 16. Provide full-time construction observation during construction utilizing a Resident Project Representative (RPR) to assist Engineer in observing progress and quality of the Work assuming a 90 calendar day construction contract for North 27th Street and a 120 calendar day construction contract for Grand Avenue. RPR shall report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor said clarifications and interpretations as issued by Engineer. RPR will prepare daily inspection reports, and daily diaries for the full term of construction activity.
- In addition to review of major work items, inspection activities shall include general review of traffic control set-up and sediment and erosion control. Major work items include, but are not limited to: water, sanitary sewer, storm drain, irrigation utilities, subgrade preparation, gravel base course preparation, concrete work, paving, signals, lighting, and striping.
- Task 17. Review and recommend payment and contract requests in accordance with City of Billings format.
- Task 18. Coordinate daily traffic control changes and prepare media releases as required.
- Task 19. Keep track of actual in-place materials, locations, and quantities and transfer to field plans for preparation of record drawings.
- Task 20. Coordinate testing of final water installations and recommend approval or adjustments as necessary.
- Task 21. Conduct final inspection and assist in project closeout. Engineer will provide two (2) paper copies and one (1) pdf file of the record drawings based on record drawings of the Contractor with:
- Offset distances measured from the centerline of the right-of-way to all public water mains.
 - Invert elevations marked for each manhole, structure, and each connection thereto, as well as at the end of each stubbed water main, stubbed water service line and stubbed fire line.
 - Locations of water and sewer services (if any) based on measurements from property lines.
 - Elevations indicating the depth of bury of all public water mains. These elevations shall be shown at each street or right-of-way intersection and at such intervals along the public water mains as may be deemed appropriate by the City Engineer.
 - Permanent bench marks shown.

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- Task 22. Prepare reproducible construction record drawings for City of Billings files from records prepared by Contractor.
- Task 23. Conduct one-year inspection with City of Billings staff and Contractor.

Phase 400 Deliverables:

One (1) 11x17-inch set of record drawings submitted to the Department of Environmental Quality, two (2) sets of 24x36-inch record drawings provided to the City of Billings, one (1) set of electronic files (pdf format) provided to the City of Billings, one (1) copy of materials and water main testing records, and final record of project construction cost.

Appendix B

Methods and Times of Payment W.O. 14-01--Schedule 1, Water Main Replacement

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.

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 \$672,740.00 (Six hundred seventy two thousand seven hundred forty dollars) based on the following tasks:

Phase 100	Project Initiation and Scoping	<u>\$5,300.00</u>
Phase 200	Preliminary Design Services	<u>\$249,515.00</u>
Phase 200A	Potholing of Subsurface Utilities	<u>\$19,110.00</u>
Phase 300	Final Design and Bidding	<u>\$84,615.00</u>
Phase 400	Construction Services	<u>\$314,200.00</u>

B. Final payment shall be the above stated basic fee less all previous payments.

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

Work 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 or by an addendum to the agreement.

Section 3. Corrections.

Costs of Billings' work that is required for the purpose of correcting the Engineer's work 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 W.O. 14-01--Schedule 1, Water Main Replacement

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

- A. Requests made or conditions identified which are beyond the scope and intent of the services identified under Appendix A.

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Appendix D

Schedule of Professional Fees W.O. 14-01--Schedule 1, Water Main Replacement

Current agreements for engineering services stipulate that the standard hourly rates are subject to review and adjustments. Hourly rates for services effective on the date of this Agreement are included below.

The itemized schedule provided below includes direct labor costs, normal payroll and overhead costs, transportation, furnishing equipment and materials normally required for performance of the work and reasonable profit. Direct project costs not itemized herein shall be paid for at actual cost.

Rate changes may be made to the fee schedule by the Engineer to reflect increased salaries and other business costs. Engineer shall submit a revised rate schedule at the time of the change if requested by the Owner. Rate schedule changes made by the Engineer during the term of this Contract shall not alter the maximum project professional fee set forth in the Contract. Changes that alter the maximum project professional fee are covered in Appendix B.

The cost of Professional Liability Insurance coverage is included in the hourly rates of personnel.

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Appendix E

Project Schedule W.O. 14-01--Schedule 1, Water Main Replacement

Based on a notice to proceed by Billings date no later than October 16, 2013, the completion date for the Engineer's work through final design shall be:

1. Project Initiation and Scoping: November 1, 2013
2. Preliminary Design Services (70% Design): January 31, 2013
3. Final Design Engineering Services: March 14, 2013
4. Construction Services to be based on Contractor Schedule.

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
W.O. 14-01--Schedule 1, Water Main Replacement**

Attach Certificate(s) of Insurance

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