

# Contract for Professional Architectural and Engineering Services

## Work Order 18-09: Downtown Traffic Study

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In consideration of the mutual promises herein, City of Billings and Kittelson & Associates 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 11 pages (Basic Services of Contractor);

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

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

Appendix D consisting of 2 pages (Schedule of Professional Fees);

Appendix E consisting of 1 pages (Project Schedule);

Appendix F consisting of 25 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 Kittelson & Associates, 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 all project deliverables (as outlined in Appendix A) 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 project deliverables have all been received by the City of Billings.
- E. The Contractor 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 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 D.
- C. This Contract shall terminate at midnight on March 1, 2019.

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 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 claim.
- 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 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.

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 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: Erin Claunch  
City of Billings  
Public Works - Engineering  
2224 Montana Avenue  
Billings, Montana 59101

FAX: (406) 237-6291

Contractor: Andy Daleiden  
Kittelson & Associates, Inc.  
101 S. Capitol Boulevard, Suite 301  
Boise, ID 83702

FAX: (208) 338-2685

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 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 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 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 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 any and all 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 all permits, licenses and other entitlements necessary to its performance under this Contract. All actions taken by the Contractor under this Contract shall comply with all applicable statutes, ordinances, rules and regulations. The Contractor 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:

Contractor: Andy Daleiden, Principal Engineer  
(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 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.

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, 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 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.

- B. 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, 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 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 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 Contractor 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.

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

County of \_\_\_\_\_

This instrument was signed and sworn to before me

on \_\_\_\_\_ by \_\_\_\_\_ as \_\_\_\_\_

(Name of signer)

(Title)

\_\_\_\_\_  
(Notary Signature)

[Affix seal/stamp to the left or below]

**Note: Final contract documents will require the Contractor's signature to be notarized if Federal funds are used.**

## Appendix A

### Basic Services of Engineer

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#### 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.
- 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 Andy Daleiden, PE working under the Principal-in-Charge, John Ringert, 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 Andy Daleiden, PE.

Section 3. Scope of Work.

This scope of work (SOW) was developed in collaboration with staff from the City of Billings in order to implement and achieve the Study purpose. The SOW uses a tiered approach to identify, evaluate, and summarize operational results for the various network alternatives to assist the City with future decision-making on the downtown transportation system. ***This phase of the Study will not include any public involvement.*** The consultant, PMT, and PAC are described below.

- **Consultant** – Kittelson & Associates, Inc. (Kittelson), the prime contractor, will lead the overall Study effort in close coordination with the PMT. DOWL will serve as a subconsultant on this Study.
- **Project Management Team (PMT)** – The PMT will consist of the City of Billings. The PMT will provide guidance to the Consultant on day-to-day activities of the Study, as well as review and provide comments on all deliverables. The PMT will meet five times with the Consultant to discuss the study activities, upcoming deliverables, and meetings via conference calls and/or in-person (if combined with another project trip). The PMT is the decision-making group for the Study.
- **Project Advisory Committee (PAC)** – The PAC will consist of a broader group of agencies and non-agency representatives from various organizations impacted by the study area. The PAC's purpose is to provide a wide range of perspectives that bring insights to the PMT during the development and evaluation of alternatives. The PAC would participate in up to three (3) meetings during the Study. Initial PAC representation is anticipated to include the following:
  - City of Billings Engineering Division
  - City of Billings Planning Division
  - City of Billings Parking Division
  - City of Billings Metropolitan Transit System (MET)
  - Montana Department of Transportation (Billings District, Traffic)
  - East Billings Urban Renewal District (EBURD)

- Downtown Billings Alliance (DBA)

Handouts, infographics, summary tables, cut sheets and PowerPoint presentations will be used during the Study to expedite conversation and decision-making with the PMT and PAC. A final report will be developed to bring together all key findings from the Study. This report will provide the City of Billings with technical findings of the transportation system in downtown for use in initiating the discussion with the public on potential transportation network changes in downtown Billings.

This SOW shall be the basis for the Professional Service Agreement (PSA). References in this SOW to “Consultant” include Kittelson & Associates, Inc. (Kittelson) and the subconsultants (DOWL). The Consultant will perform quality control checks of all deliverables listed in this SOW prior to submittal. Unless otherwise noted, all tasks and deliverables listed in this SOW will be completed by the Consultant. The Consultant plans to deliver the Study Report in October 2018. The Study will be completed by March 1, 2019.

### **Task 1. Project Management**

*This task includes preparing for and attending project coordination meetings with the PMT, and conducting project management activities for the duration of this Study.*

- 1.1. **Coordination Meetings with PMT.** Prepare for and direct up to five (5), one-hour coordination, in-person meetings (~8-week intervals) with the PMT. The purpose of these meetings is to provide project status updates, discuss upcoming deliverables and/or public involvement activities, key milestones and review comments on deliverables. Provide brief, email summaries for each coordination meeting.
- 1.2. **Email Updates to the City.** Prepare six (6) email updates for the project and send to the City’s project manager for use with internal coordination and discussion with stakeholders. These email updates would occur between the PMT meetings.
- 1.3. **Monthly Invoices & Progress Reports.** Prepare monthly invoices and progress reports. Progress reports will summarize all work completed by the Consultant in the month. One invoice and progress report will be submitted to the City each month.
- 1.4. **Project Advisory Committee (PAC) Meetings.** Prepare for and direct up to three (3) two-hour in-person meetings with the PAC. A PowerPoint presentation will be developed for these meetings to support the discussion. Prepare meeting summaries from each meeting. These meetings will be held at three milestones of the study:
  - Meeting #1 – Review and discuss study purpose, existing conditions, future year 2040 conditions (*this topic may fall within meeting number two due to timeline of travel demand model update*), evaluation criteria, and initial alternatives
  - Meeting #2 – Review and discuss alternatives and evaluation results
  - Meeting #3 – Review and discuss the Downtown Traffic Study Report and next steps

#### Task 1 Deliverables:

- PMT meeting summaries (5, email)
- Email updates (6, email)
- Monthly Progress Report
- Materials and summaries for up to three (3) PAC meetings (PDF)

## City Responsibilities

- Provide meeting facility (if needed) and attend PMT meetings
- Review, approve, and process monthly invoices and progress reports
- Provide meeting facility and attend PAC meetings

## **Task 2. Data Collection**

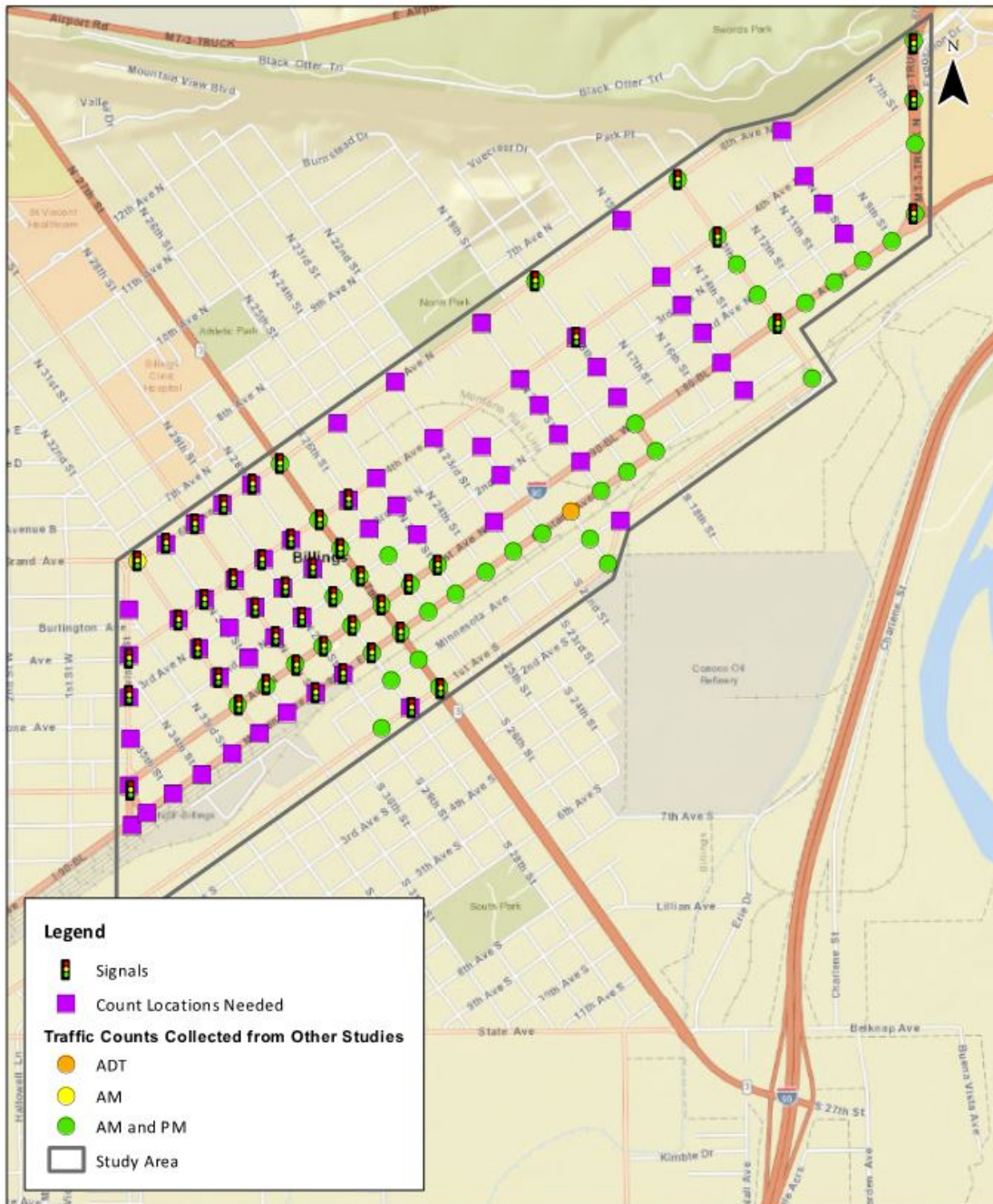
*This task includes the collection and review of all data necessary to support and complete this Study.*

- 2.1. **Plans/Studies Review.** Obtain and review the applicable studies, plans, and/or activities in the study area, including, but not limited to (*italics text indicates the study is ongoing*):
  - 25<sup>th</sup> Street Pedestrian/Bike Bridge Master Plan (2001)
  - East Billings Urban Renewal District Master Plan (2009)
  - Billings Downtown Circulatory Study (2012)
  - Hospitality Corridor Planning Study (2013)
  - Billings Urban Area Long Range Transportation Plan (2014)
  - *Billings Urban Area Long Range Transportation Plan (2018 Update)*
  - Billings Bypass EIS (2014)
  - Billings Airport Road & Main Street Concept Study (2016)
  - *Billings Airport Road & Main Street Final Design (2018)*
  - Billings Urban Area Transportation Improvement Program FY 2017-2021 (2017)
  - City of Billings Complete Street Progress Report (2017)
  - Billings Area Bikeway & Trails Master Plan Update (2017)
  - *1<sup>st</sup> Avenue North Billings (2017-2018)*
  - *Billings Urban Area Regional Travel Demand Model (2018)*
  - *27<sup>th</sup> Street Railroad Crossing Study (2018)*
  - *Exposition Drive & 1<sup>st</sup> Avenue N Intersection Study (2018)*
  - Recent Traffic Impact Studies for new developments
- 2.2. **Intersection Turning Movement Counts.** Obtain or collect 2-hour intersection turning movement counts, including heavy vehicle, bicycle, and pedestrian counts, for typical midweek day (Tuesday – Thursday) during the a.m. peak period (7:00 a.m. to 9:00 a.m.) and p.m. peak period (4:00 p.m. to 6:00 p.m.) at the following intersection types and driveways, locations depicted on Figure 2 (next page):
  - Signalized intersections = 48
    - Traffic counts will be obtained or collected at each signalized intersection in the study area. Signalized intersection counts are available for 23 intersections; therefore, 25 signalized intersections will be counted for this study.
  - Unsignalized intersections = 135
    - Not all unsignalized intersections will be counted. A total of 67 unsignalized intersection counts will be obtained or collected. There are counts available for

23 unsignalized intersections; therefore, 44 unsignalized intersections will be counted for this study. Engineering judgement will be used to estimate traffic volumes at unsignalized intersections where counts are not obtained or collected.

*Note: Video of the turning movement counts will be collected for 13-hours and summarized as part of the traffic count data. This information will be provided to the City and be available for use to do additional analysis during off-peak or noon peak hours, if needed.*

**Figure 2. Count Inventory and Locations**



- 2.3. **Driveway Counts.** Collect 1-hour turning movement counts at 12 commercial driveways in the study area for a typical midweek day (Tuesday – Thursday) during the a.m. peak period (7:00 a.m. to 9:00 a.m.) and p.m. peak period (4:00 p.m. to 6:00 p.m.). *Note: We plan to only collect 1-hour counts at the driveways to reduce the data collection cost. These 1-hour counts will be based on the peak hour identified from the study intersection traffic counts.*
- 2.4. **Daily Traffic Counts.** Obtain daily traffic counts from the City of Billings/Yellowstone County Planning Division Traffic Count Map database (most recent is 2017 on their website).
- 2.5. **Travel Times.** Collect up to five (5) travel time runs for the east-west (Montana Avenue, 1<sup>st</sup> Avenue N, 2<sup>nd</sup> Avenue N, and 3<sup>rd</sup> Avenue N, 4<sup>th</sup> Avenue N, and 6<sup>th</sup> Avenue N) and north-south (N 27<sup>th</sup> Street, N Broadway, N 13<sup>th</sup> Street, and N 20<sup>th</sup> Street) routes during the weekday a.m. and p.m. peak time periods. This information will be used to validate the existing conditions Synchro model and for use in the evaluation results of the alternatives.
- 2.6. **Crash Reports.** Obtain intersection and roadway crash reports from MDT for the most recent five year period at the study intersections and roadways.
- 2.7. **Signal Timing.** Obtain signal timing plans from the City and MDT for the signalized study intersections.
- 2.8. **Synchro Network.** Obtain the existing weekday a.m. and p.m. peak hour Synchro network from the City and/or MDT for the study area.
- 2.9. **Regional Travel Demand Model Forecast Traffic Volumes.** The City/County Planning (MPO) are currently working on the development of the Billings Urban Area Regional Travel Demand Model. Future year traffic forecasts are anticipated to be available in late summer and are planned to be used for this Study. Obtain from City/County Planning (MPO) the base year and future year 2040 p.m. peak hour and daily traffic volumes from the regional travel demand model on the study area roadways.
- 2.10. **As Builts.** Obtain as-builts as necessary from the City of roadways and intersections within the study area. As-built plans would be used for verifying roadway widths and utility locations where potential alternatives may impact existing infrastructure.
- 2.11. **GIS Data.** Obtain GIS data from the City for the study area to use in developing the base map. GIS data currently identified but not limited to:
  - Edge of pavement and/or curb line shapefiles
  - On-street parking location shapefile
  - Right-of-way and/or parcel information shapefiles
  - Utility shapefiles including: above/below ground electrical; storm drains and sewer; and irrigation
  - Sidewalk shapefile
  - Bicycle network shapefile
  - Traffic control (e.g. traffic signal, stop control) shapefile

This task doesn't include developing or updating shapefiles within the study area. For shapefiles that are not obtained from the City, information will be collected via GoogleEarth and verified during the site visit as described in 2.13.

- 2.12. **Aerial Data.** Obtain an aerial from City for the study area to be use in developing the base map. If an updated aerial from the City is not available, we will use the most recent aerial from either Google or Bing.
- 2.13. **Site Visit.** Perform a site visit during the weekday morning, afternoon, and evening time periods to observe traffic operations and to inventory the roadways, lane geometry, driveways, posted speeds, pedestrian facilities, bicycle facilities, transit facilities, and other transportation elements in the study area.

Task 2 Deliverables:

- Technical Appendix of data collection (PDF)
- Videos of the turning movement counts
- GIS and Aerial Basemap (dgn)

City Responsibilities

- Provide background studies, plans, and construction projects within the study area
- Provide traffic impact studies within the study area
- Provide GIS data within the study area
- Provide signal timing for the study intersections (MDT and City request)
- Provide crash data for the most recent five years at the study intersections and roadways (MDT request)
- Provide any traffic volume data in the study area
- Provide as-builts as necessary of the study roadways and intersections within the study area
- Provide aerial within the study area

**Task 3. Analyze Existing and Future No-Build Conditions**

*This task includes the analysis of existing (year 2018) and future (year 2040) No-Build conditions at the study area intersections and roadways. The analysis will be performed in accordance with the City of Billings' and MDT standards for their respective roadways.*

- 3.1. **Existing Transportation Infrastructure and Volumes.** The existing transportation infrastructure (e.g. roadways, cross-sections, driveways, bike facilities, sidewalks, traffic signals, transit routes and stops) and volumes (vehicle, freight, pedestrian, bicycle, transit ridership) for all modes will be summarized in tables and infographics. Past studies, field work, and new traffic data will be used to complete this subtask.
- Provide four figures, one summarizing the roadway classifications and traffic control devices along study roadways and at study intersection, the second figure will illustrate the bike facilities, sidewalks, transit routes, truck routes, and at-grade railroad crossings within the study area, and the third and fourth figures will include traffic volumes within the study area.
- 3.2. **Existing Conditions Operations Analysis.** Build a Synchro 10 model for the study area according to City of Billings' standards. The Synchro model will be provided to the City in two reviews: 1<sup>st</sup> review - network, geometry, and signal timing, 2<sup>nd</sup> review – traffic volumes and operations. Using the Synchro 10 model, perform a traffic operations analysis for the existing weekday a.m. and p.m. peak hours according to the Highway Capacity Manual, 6<sup>th</sup> Edition (HCM) procedures as applied through Synchro 10.

- 3.3. **Existing Conditions Safety Evaluation.** Review crash data at the study intersections and roadway segments to identify and summarize existing crash patterns.
- Provide four figures summarizing the existing condition operations and safety evaluation at the study intersections.
- 3.4. **Year 2040 Traffic Volume Forecasting.** Develop future year 2040 traffic volumes based on existing traffic volumes, information from past studies, and in conjunction with the development of the Billings Urban Area Regional Travel Demand Model output. Using the output from the travel demand model and existing traffic volumes, future year 2040 traffic volumes will be developed at the study area intersections and roadway links using the methodology in *NCHRP Report 765: Analytical Travel Forecasting Approaches for Project-Level Planning and Design*. The traffic projections from past studies in the area will be used to compare and review with these projections for consistency and reasonableness. Coordinate with the City to determine appropriate future year 2040 traffic volumes for the weekday a.m. and p.m. peak hours. Future year 2040 traffic volumes will be confirmed with the City prior to moving forward with operations analysis.
- Provide two figures summarizing the year 2040 traffic volumes during the weekday a.m. and p.m. peak hours at the study intersections.
- 3.5. **Year 2040 No-Build Intersection Traffic Operations Analysis.** Conduct year 2040 intersection traffic operations analysis for the weekday a.m. and p.m. peak hours using the year 2040 traffic volumes for the No-Build Alternative using Synchro 10. This analysis will serve as a basis of comparison for intersection design alternatives.
- Provide two figures summarizing the year 2040 traffic operations during the weekday a.m. and p.m. peak hours at the study intersections.
- 3.6. **Summarize Existing Conditions, Future No-Build Conditions, and Key Opportunities and Challenges – Infographic Fact Sheets.** Develop three (3) infographic fact sheets that summarizes the key information from the above tasks for use at PMT and PAC meetings. Submit these items to the City.

Task 3 Deliverables:

- Synchro 10 model of study area (a.m. and p.m. peak hours)
  - Existing conditions (year 2018)
  - Future conditions (year 2040)
- Provide twelve (12) draft figures (PDF) summarizing the following information:
  - Existing roadway classification and traffic control devices
  - Existing bike facilities, sidewalks, transit routes, truck routes, and at-grade railroad crossings
  - Existing traffic volumes at study intersections
  - Existing traffic conditions at study intersections
  - Existing crash history at study intersections
  - Forecasted year 2040 traffic volumes at study intersections

- Year 2040 traffic operations at study intersections
- Provide twelve (12) final figures of the above information (PDF)
- Draft Infographic fact sheet for existing conditions (PDF)
- Draft Infographic fact sheet for future conditions (PDF)
- Draft Infographic fact sheet for key opportunities and challenges (PDF)
- Final Infographic fact sheet for existing conditions (PDF)
- Final Infographic fact sheet for future conditions (PDF)
- Final Infographic fact sheet for key opportunities and challenges (PDF)

#### City Responsibilities

- Review and provide comments on the year 2018 existing conditions Synchro model
- Review and provide comments on the year 2040 traffic volumes forecasting
- Review and provide comments on the *Draft figures for Existing and Future Conditions*
- Review and provide comments on the *Draft Infographic Fact Sheet for Existing Conditions*
- Review and provide comments on the *Draft Infographic Fact Sheet for Future Conditions*

### **Task 4. Alternatives Development, Analysis, and Evaluation**

*This task includes developing the evaluation criteria and performance measures that will be used to evaluate the alternatives, as well as developing an initial list of alternatives for consideration in the evaluation of the alternatives.*

- 4.1. **Evaluation Criteria and Performance Measures.** Identify the evaluation criteria and supportive measures of effectiveness and analysis approach/tool for evaluating the alternatives. Potential criteria includes:
  - Traffic operations
  - Safety performance
  - Parking impacts
  - Pedestrian, bicycle, and transit accommodations
  - Planning-level cost estimates (range)
- 4.2. **Initial List of Alternatives.** Develop an initial alternatives list (assumes up to 7 alternatives plus no-build alternative) with supporting high-level graphic. Initial alternatives will include:
  - i. No-build
  - ii. *Conversion of One-Way to Two-Way Streets:* This strategy analyzes the feasibility of converting existing one-way streets to two-way streets. The following street segments were identified:
    - 2<sup>nd</sup> Avenue North & 3<sup>rd</sup> Avenue North
    - All north/south streets (25<sup>th</sup> Street, 26<sup>th</sup> Street, 27<sup>th</sup> Street, 28<sup>th</sup> Street, 29<sup>th</sup> Street, 30<sup>th</sup> Street, 31<sup>st</sup> Street, 32<sup>nd</sup> Street, and 33<sup>rd</sup> Street)

- iii. *Road Diet and/or Lane Closures*: This strategy analyzes the feasibility of reducing the number of existing lanes and/or implementing traffic calming strategies such as, but not limited to: speed humps, raised crosswalks, bulb-outs, and angle versus parallel parking. This strategy is aimed to enhance or accommodate pedestrian and bicycle infrastructure and/or on-street parking capabilities. The following locations were identified:
  - o Lane closures on Montana Avenue
  - o Full closure roadway of 29<sup>th</sup> Street between 2<sup>nd</sup> Avenue North and 4<sup>th</sup> Avenue North (associated with One Big Sky Center)
  - o Closing the at-grade railroad crossings on 28<sup>th</sup> Street and 29<sup>th</sup> Street
  - o Lane reduction on the east end of 6<sup>th</sup> Avenue North
- iv. Up to two additional alternatives or combinations of the above treatments.

The initial list of alternatives will be provided to the City before proceeding with any layout, coordination, or refinement of initial alternatives.

- 4.3. **Refined List of Alternatives for Evaluation.** The initial list of alternatives will be revised based on further discussions with the PMT and PAC. Develop preliminary schematics of up to seven (7) alternatives over aerial and GIS information. These illustrations of the alternatives would support the evaluation and identify key elements of the alternatives for use in screening that alternative.
- 4.4. **Operational Analysis.** Perform a macroscopic operational analysis of up to seven (7) alternatives during the future year 2040 traffic conditions, weekday a.m. and p.m. peak hours using Synchro 10. This operational analysis will focus on the roadway and nearby intersections determined to be operationally impacted (e.g., rerouted traffic) by the alternative being analyzed, as well as a summary of travel times for key east-west and north-south routes.
  - Provide an operational figure summarizing traffic volumes and expected traffic operations at key intersections for each of the seven alternatives.
- 4.5. **Parking Assessment.** Identify the number of parking spaces added or removed for each alternative and show the location on the alternative maps.
- 4.6. **Qualitative Assessment.** Identify advantages and disadvantages of the seven (7) alternatives related to safety performance (e.g., conflict point analysis, crash modification factors, if applicable); vehicle routing; near-term and long-term access to private properties and public facilities; pedestrian, bicycle, and transit facilities; and compatibility with other plans/studies/projects.
- 4.7. **Planning Level Cost Estimates.** Prepare preliminary construction cost estimates for each of the seven (7) alternatives.
- 4.8. **Alternatives Evaluation.** Evaluate up to seven (7) alternatives and the no-build alternative based on the evaluation criteria identified in the tasks above. This evaluation would be performed with a mix of quantitative and qualitative analysis with the intention of providing the benefits and tradeoffs for each alternative for future planning purposes.

- 4.9. **Documentation – Draft Infographic Fact Sheets.** Summarize the above information in eight (8) Draft infographic fact sheets, one for each alternative and a summary of all alternatives for comparison. Submit these items to the City.
- 4.10. **Tier 1 Documentation – Final Infographic Fact Sheets.** Address the comments received from the City on the eight (8) infographic fact sheets. Prepare eight (8) Final infographic fact sheets and submit to the City.

Task 4 Deliverables:

- Synchro 10 models for each of the alternatives
- Provide seven draft figures summarizing the traffic volumes and expected operations for each alternative (PDF)
- Provide seven final figures summarizing the traffic volumes and expected operations for each alternative (PDF)
- Draft infographic fact sheet for alternatives (7 fact sheets, PDF)
- Draft infographic fact sheet for alternative evaluation results (PDF)
- Final infographic fact sheet for alternatives (7 fact sheets, PDF)
- Final infographic fact sheet for alternative evaluation results (PDF)

City Responsibilities

- Review and provide comments on the *Draft figures and Draft Infographic Fact Sheets for Alternatives and Evaluation Results*

**Task 5. Study Report**

*This task will compile all elements of the study into a draft and final Traffic Study report.*

- 5.1. **Alternative Concept Illustrations.** Update alternative schematics and provide cross sections illustrations highlighting potential curb-to-curb changes as needed. These illustrations will be included in the study report as necessary.
- 5.2. **Draft Traffic Study Report.** Prepare a Draft Traffic Study Report (20 pages in length, not including appendices) for review by the City. The report will concisely summarize the key conclusions and findings from all analysis, infographic fact sheets, and PMT and PAC meetings, providing guidance for the City for future planning purposes.
- 5.3. **Final Concept Study Report.** Review PMT and PAC comments on the Draft Traffic Study Report and incorporate any recommended changes into a Final Traffic Study Report.

Task 5 Deliverables:

- Draft *Traffic Study Report* (20 pages in length, not including Appendices, PDF)
- Final *Traffic Study Report* (20 pages in length, not including Appendices, PDF)

City Responsibilities

- Review and provide comments on the *Draft Traffic Study Report*

## Appendix B

### Methods and Times of Payment

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

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

Partial payment shall be made to the Consultant upon receipt of the Consultant's pay estimate, said estimate being proportioned to the work completed by the Consultant. 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 on this contract, Appendix A, the Consultant shall be paid based upon actual time accrued, but not to exceed the following amounts:
  - a. Traffic Study: \$189,617.00
- 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 study 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 Consultant's work which requires redoing by Billings shall be deducted from any payments due the Consultant, if the Consultant 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 Consultant's costs and hourly rates as shown in Appendix D have increased for all comparable clients.

## **Appendix C**

### **Additional Services of Engineer**

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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

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.

Rates listed below are fully burdened hourly rates for key personnel along with average rates for the remaining staff classifications as of April 2018. These rates were developed using Kittelon's audited overhead rate of 211.41% and 12% profit and are for budgeting purposes only. Rates will be adjusted 7/1 to cover salary increases due to changes in roles & responsibilities. Actual wage rates will be invoiced.

#### Section 1. Professional Services.

<u>Rate</u>	<u>Fully Burdened Rate</u>	<u>Overtime</u>
A. Senior Principal Engineer/Planner	\$ 261.59	\$ N/A
1. John Ringert	\$ 243.03	\$ N/A
B. Principal Engineer/Planner	\$ 218.22	\$ N/A
1. Andy Daleiden	\$ 210.98	\$ N/A
C. Associate Engineer/Planner	\$ 191.32	\$ N/A
D. Senior Engineer/Planner	\$ 150.35	\$ N/A
E. Engineer / Planner	\$ 121.76	\$ N/A
1. Brett Korporaal	\$ 111.09	\$ N/A
F. Transportation Analyst	\$ 102.37	\$ N/A
1. Jamie Markosian	\$ 103.41	\$ N/A
G. Technician I	\$ 87.28	\$ N/A
1. Makenzie Cooper	\$ 75.93	\$ N/A
H. Technician II	\$ 99.40	\$ N/A
I. Senior Technician	\$ 124.42	\$ N/A
1. Jon Sommerville	\$ 119.67	\$ N/A
J. Associate Technician	\$ 145.07	\$ N/A
1. Steve Rhyne	\$ 149.00	\$ N/A
K. Office Support	\$ 76.49	\$ N/A

Section 2. Surveying Services.

Section 3. Equipment Rates.

Section 4. Hydrologic Equipment

Section 5. Supplies, Office, Drafting, & Reproduction.

Section 6. Field Supplies.

Section 7. Materials Testing

Section 8. Miscellaneous Expenses

Direct miscellaneous expenses itemized, but not limited to herein shall be paid for at actual cost.

A. Lodging	<u>\$125.00/person</u>
B. Meals	<u>\$ 75.00/day</u>
C. Mileage	<u>\$ 0.575/mile</u>
D. Parking	<u>\$ 15.00/day</u>
E. Car Rental	<u>\$ 5.00/day</u>
F. Airfare	<u>\$550.00/person</u>

Section 9. Materials and Other Direct Costs.

Materials and other direct costs will be invoiced at current rates, plus a ten percent (10%) handling fee. Included as direct costs are the following:

- A. Approved Employee Meals, Lodging, Transportation
- B. Premium Delivery Service (UPS, Federal Express, etc.)
- C. Toll Communication Services (Telephone, Fax, etc.)
- D. Supplies
- E. Premiums for Special Insurance, Performance Bonds, etc.
- F. Other Out-of-Pocket Expenses
- G. Consultants

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

## Appendix E

### Project Schedule

Based on a notice to proceed by Billings date no later than May 21, 2018, the completion date for the Engineer's work through final design is outlined below:

#### PROJECT SCHEDULE

Task	May	June	July	August	September	October	November	December	January	February
<b>1. Project Management</b>										
<b>2. Data Collection</b>										
PMT Meeting #1										
<b>3. Analyze Existing and Future Conditions</b>										
PMT Meeting #2										
PAC Meeting #1										
<b>4. Alternatives Development, Analysis, and Evaluation</b>										
PMT Meeting #3										
PMT Meeting #4										
PAC Meeting #2										
<b>5. Study Report</b>										
PMT Meeting #5										
PAC Meeting #3										

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**

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(Attach Certificate(s) of Insurance)

