AGREEMENT made _________________________________, 2019, between the City of Rapid City, SD (City) and AE2S, (Engineer), located at 1560 Concourse Drive, Rapid City SD  57703. City intends to obtain services for design and bidding for Elk Vale Lift Station Gravity Main & Force Main Upgrade, Project No. 18-2460 / CIP No. 50729. The scope of services is as described within this document and as further described in Exhibits A, B and C (attached).

The City and the Engineer agree as follows:

The Engineer shall provide professional engineering services for the City in all phases of the Project and as further defined in Exhibits A, B and C (attached), serve as the City’s professional engineering representative for the Project, and give professional engineering consultation and advice to the City while performing its services.

Section 1—Basic Services of Engineer

1.1 General

1.1.1 The Engineer shall perform professional services described in this agreement, which include customary engineering services. Engineer intends to serve as the City’s professional representative for those services as defined in this agreement and to provide advice and consultation to the City as a professional. Any opinions of probable project cost, approvals, and other decisions provided by Engineer for the City are rendered on the basis of experience and qualifications and represent Engineer’s professional judgment.

1.1.2 All work shall be performed by or under the direct supervision of a professional Engineer licensed to practice in South Dakota.

1.1.3 All documents including Drawings and Specifications provided or furnished by Engineer pursuant to this Agreement are instruments of service in respect of the Project and Engineer shall retain an ownership therein. Reuse of any documents pertaining to this project by the City on extensions of this project or on any other project shall be at the City’s risk. The City agrees to defend, indemnify, and hold harmless Engineer from all claims, damages, and expenses including attorney’s fees arising out of such reuse of the documents by the City or by others acting through the City.
1.1.4 The contract will be based on an hourly rate and reimbursable fee schedule with a maximum not-to-exceed amount.

1.2 **Scope of Work**

The Engineer shall:

1.2.1 Consult with the City, other agencies, groups, consultants, and/or individuals to clarify and define requirements for the Project and review available data.

1.2.2 Perform the tasks described in the Scope of Services. (See Exhibit A.)

1.2.3 Conduct a location survey of the Project to the extent deemed necessary to provide adequate site information.

1.2.4 Prepare a report presenting the results of the study as outlined in the scope of services.

**Section 2—Information Provided by City**

The City will provide any information in its possession for the project at no cost to the Engineer.

**Section 3—Notice to Proceed**

The City will issue a written notification to the Engineer to proceed with the work. The Engineer shall not start work prior to receipt of the written notice. The Engineer shall not be paid for any work performed prior to receiving the Notice to Proceed. The City will issue two separate notice to proceed:

- Task 1 Preliminary Design Services
- Task 2-3 Final Design and Bidding Services

**Section 4—Mutual Covenants**

4.1 **General**

4.1.1 The Engineer shall not sublet or assign any part of the work under this Agreement without written authority from the City.

4.1.2 The City and the Engineer each binds itself and partners, successors, executors, administrators, assigns, and legal representatives to the other party to this agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, regarding all covenants, agreements, and obligations of this agreement.
4.1.3 Nothing in this agreement shall give any rights or benefits to anyone other than the City and the Engineer.

4.1.4 This agreement constitutes the entire agreement between the City and the Engineer and supersedes all prior written or oral understandings. This agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

4.1.5 The Engineer shall make such revisions in plans which may already have been completed, approved, and accepted by the City, as are necessary to correct Engineer’s errors or omissions in the plans, when requested to do so by the City, without extra compensation therefore.

4.1.6 If the City requests that previously satisfactorily completed and accepted plans or parts thereof be revised, the Engineer shall make the revisions requested by the City. This work shall be paid for as extra work.

4.1.7 If the City changes the location from the one furnished to the Engineer, or changes the basic design requiring a new survey for the portions so changed, the redesign will be paid for as extra work.

4.1.8 The City may at any time by written order make changes within the general scope of this Agreement in the work and services to be performed by the Engineer. Any changes which materially increase or reduce the cost of or the time required for the performance of the Agreement shall be deemed a change in the scope of work for which an adjustment shall be made in the Agreement price or of the time for performance, or both, and the Agreement shall be modified in writing accordingly. Additional work necessary due to the extension of project limits shall be paid for as extra work.

4.1.9 Extra work, as authorized by the City, will be paid for separately and be in addition to the consideration of this Section.

4.1.10 For those projects involving conceptual or process development services, activities often cannot be fully defined during the initial planning. As the project does progress, facts and conditions uncovered may reveal a change in direction that may alter the scope of services. Engineer will promptly inform the City in writing of such situations so that changes in this agreement can be renegotiated.

4.1.11 This Agreement may be terminated (a) by the City with or without cause upon seven days’ written notice to the Engineer and (b) by the Engineer for cause upon seven days’ written notice to the City. If the City terminates the agreement without cause, the Engineer will be paid for
all services rendered and all reimbursable expenses incurred prior to the date of termination.

If termination is due to the failure of the Engineer to fulfill its agreement obligations, the City may take over the work and complete it. In such case, the Engineer shall be liable to the City for any additional cost to the extent directly resulting from Engineer’s action.

4.1.12 The City or its duly authorized representatives may examine any books, documents, papers, and records of the Engineer involving transactions related to this agreement for three years after final payment. All examinations will be performed at reasonable times, with proper notice. Engineer’s documentation will be in a format consistent with general accounting procedures.

4.1.13 The City shall designate a representative authorized to act on the City’s behalf with respect to the Project. The City or such authorized representative shall render decisions in a timely manner pertaining to documents submitted by the Engineer in order to avoid unreasonable delay in the orderly and sequential progress of the Engineer’s services.

4.1.14 Costs and schedule commitments shall be subject to renegotiation for delays caused by the City’s failure to provide specified facilities or information or for delays caused by other parties, excluding subcontractors and sub-consultants, unpredictable occurrences including without limitation, fires, floods, riots, strikes, unavailability of labor or materials, delays or defaults by suppliers of materials or services, process shutdowns, acts of God, or the public enemy, or acts of regulations of any governmental agency or any other conditions or circumstances beyond the control of the City or Engineer. Temporary delays of services caused by any of the above which results in additional costs beyond those outlined may require renegotiation of this agreement.

4.1.15 The City will give prompt written notice to the Engineer if the City becomes aware of any fault or defect in the Project or nonconformance with the Project Documents.

4.1.16 Unless otherwise provided in this Agreement, the Engineer and the Engineer’s consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to hazardous materials in any form at the project site, including but not limited to asbestos products, polychlorinated biphenyl (PCB), or other toxic substances.
4.1.17 In the event asbestos or toxic materials are encountered at the jobsite, or should it become known in any way that such materials may be present at the jobsite or any adjacent areas that may affect the performance of Engineer’s services, Engineer may, at their option and without liability for consequential or any other damages, suspend performance of services on the project until the City retains appropriate specialist CONSULTANT(S) or contractor(s) to identify, abate, and/or remove the asbestos or hazardous or toxic materials.

4.1.18 This agreement, unless explicitly indicated in writing, shall not be construed as giving Engineer the responsibility or authority to direct or supervise construction means, methods, techniques, sequences, or procedures of construction selected by any contractors or subcontractors or the safety precautions and programs incident to the work of any contractors or subcontractors.

4.1.19 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or in any way involving the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids, or gases, waste materials, or other irritants, contaminants, or pollutants.

4.1.20 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or any way involving the specification or recommendation of asbestos, in any form, or any claims based upon use of a product containing asbestos.

4.1.21 Engineer hereby represents and warrants that it does not fail or refuse to collect or remit South Dakota or City sales or use tax for transactions which are taxable under the laws of the State of South Dakota.

4.2 City of Rapid City NonDiscrimination Policy Statement

In compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination act of 1975, the Americans with Disabilities Act of 1990, and other nondiscrimination authorities it is the policy of the City of Rapid City, 300 Sixth Street, Rapid City, SD 57701-5035, to provide benefits, services, and employment to all persons without regard to race, color, national origin, sex, disabilities/handicaps, age, or income status. No distinction is made among any persons in eligibility for the reception of benefits and services provided by or through the auspices of the City of Rapid City.

Engineer will permit access to any and all records pertaining to hiring and employment and to other pertinent data and records for the purpose of enabling the Commission, its agencies or representatives, to ascertain compliance with the above provisions.
This section shall be binding on all subcontractors or suppliers.

Section 5—Payments to the Engineer

5.1 Schedule of Pay Rates

The City will pay the Engineer for services rendered or authorized extra work according to the Engineer’s hourly and reimbursable rate schedule described in Exhibit C.

5.2 Fee

The maximum amount of the fee for the services as detailed in Section 1.2 shall not exceed $522,701.00 unless the scope of the project is changed as outlined in Section 4. If expenses exceed the maximum amount, the Engineer shall complete the design as agreed upon here without any additional compensation. Sub task dollar amounts may be reallocated to other tasks as long as the total fee is not exceeded. Prime consultant may not mark up sub-consultant or subcontractor services.

5.3 Progress Payments

Monthly progress payments shall be processed by the City upon receipt of the claim as computed by the Engineer based on work completed during the month per the hourly rates and allowable reimbursable as established in Section 5.1 and approved by the City.

Net payment to the Engineer shall be due within forty-five (45) days of receipt by the City.

Section 6—Completion of Services

The Engineer shall complete services on or before 12/31/2020 based on an award date of 10/28/2019.

Section 7—Insurance Requirements

7.1 Insurance Required

The Engineer shall secure the insurance specified below. The insurance shall be issued by insurance company(s) acceptable to the City and may be in a policy or policies of insurance, primary or excess. Certificates of all required insurance including any policy endorsements shall be provided to the City prior to or upon the execution of this Agreement.
7.2 Cancellation

The Engineer will provide the City with at least 30 days’ written notice of an insurer’s intent to cancel or not renew any of the insurance coverage. The Contractor agrees to hold the City harmless from any liability, including additional premium due because of the Contractor’s failure to maintain the coverage limits required.

7.3 City Acceptance of Proof

The City’s approval or acceptance of certificates of insurance does not constitute City assumption of responsibility for the validity of any insurance policies nor does the City represent that the coverages and limits described in this agreement are adequate to protect the Engineer, its consultants or subcontractors interests, and assumes no liability therefore. The Engineer will hold the City harmless from any liability, including additional premium due, because of the Engineer’s failure to maintain the coverage limits required.

7.4 Specific Requirements

7.4.1 Workers’ compensation insurance with statutory limits required by South Dakota law. Coverage B-Employer’s Liability coverage of not less than $500,000 each accident, $500,000 disease-policy limit, and $500,000 disease-each employee.

7.4.2 Commercial general liability insurance providing occurrence form contractual, personal injury, bodily injury and property damage liability coverage with limits of not less than $1,000,000 per occurrence, $2,000,000 general aggregate, and $2,000,000 aggregate products and completed operations. If the occurrence form is not available, claims-made coverage shall be maintained for three years after completion of the terms of this agreement. The policy shall name the City and its representatives as an additional insured.

7.4.3 Automobile liability insurance covering all owned, nonowned, and hired automobiles, trucks, and trailers. The coverage shall be at least as broad as that found in the standard comprehensive automobile liability policy with limits of not less than $1,000,000 combined single limit each occurrence. The required limit may include excess liability (umbrella) coverage.

7.4.4 Professional liability insurance providing claims-made coverage for claims arising from the negligent acts, errors or omissions of the Engineer or its consultants, of not less than $1,000,000 each occurrence and not less than $1,000,000 annual aggregate. Coverage
shall be maintained for at least three years after final completion of the services.

Section 8—Hold Harmless

The Engineer hereby agrees to hold the City harmless from any and all claims or liability including attorneys’ fees arising out of the professional services furnished under this Agreement, and for bodily injury or property damage arising out of services furnished under this Agreement, providing that such claims or liability are the result of a negligent act, error or omission of the Engineer and/or its employees/agents arising out of the professional services described in the Agreement.

Section 9—Independent Business

The parties agree that the Engineer operates an independent business and is contracting to do work according to his own methods, without being subject to the control of the City, except as to the product or the result of the work. The relationship between the City and the Engineer shall be that as between an independent contractor and the City and not as an employer-employee relationship. The payment to the Engineer is inclusive of any use, excise, income or any other tax arising out of this agreement.

Section 10—Indemnification

If this project involves construction and Engineer does not provide consulting services during construction including, but not limited to, onsite monitoring, site visits, site observation, shop drawing review and/or design clarifications, City agrees to indemnify and hold harmless Engineer from any liability arising from the construction activities undertaken for this project, except to the extent such liability is caused by Engineer’s negligence.

Section 11—Controlling Law and Venue

This Agreement shall be subject to, interpreted and enforced according to the laws of the State of South Dakota, without regard to any conflicts of law provisions. Parties agree to submit to the exclusive venue and jurisdiction of the State of South Dakota, 7th Judicial Circuit, Pennington County.

Section 12—Severability

Any unenforceable provision herein shall be amended to the extent necessary to make it enforceable; if not possible, it shall be deleted and all other provisions shall remain in full force and effect.
Section 13—Funds Appropriation

If funds are not budgeted or appropriated for any fiscal year for services provided by the terms of this agreement, this agreement shall impose no obligation on the City for payment. This agreement is null and void except as to annual payments herein agreed upon for which funds have been budgeted or appropriated, and no right of action or damage shall accrue to the benefit of the Engineer, its successors or assignees, for any further payments. For future phases of this or any project, project components not identified within this contract shall not constitute an obligation by the City until funding for that component has been appropriated.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

City of Rapid City:               Engineer:

__________________________________________                             _______________________________________
MAYOR                                                      Dustin Dale, PE, ENGINEER

DATE:______________________________               DATE:______________________________

ATTEST:

__________________________________________
FINANCE OFFICER

Reviewed By:

Nicole Lecy, PROJECT MANAGER

DATE: ____________________________

CITY’S DESIGNATED PROJECT REPRESENTATIVE             ENGINEERING FIRM’S DESIGNATED PROJECT REPRESENTATIVE

NAME: Nicole Lecy                                   NAME: Dustin Dale, Project Manager
PHONE: 605-394-4154                                   PHONE: 605-341-7800
EMAIL: Nicole.lecy@rcgov.org                          EMAIL: Dustin.Dale@ae2s.com
Exhibit A

This project will include Preliminary Design Services, Final Design Services, and Bidding Services for the Elk Vale Lift Station – Gravity & Force Main Upgrade. Specific aspects of the project are as follows:

- Upgrade of existing Elk Vale Lift Station to accommodate current and future growth upstream of the station. Increasing the capacity of the Elk Vale Lift Station will allow future development growth within the service basin. The upgrade shall meet all city and state design criteria.

- Installation of approximately 11,500 LF of new Force Main pipes from the Elk Vale Lift Station along Elk Vale Road to the location where the system transitions to gravity main. New gravity main pipe (approximately 3,800 LF) will be installed to utilize the new force main capacity.

- Review of the existing odor control system at the Lift Station with modifications as needed to accommodate longer retention times anticipated in larger diameter force mains.

- Develop requirements for a construction phase operation plan for existing lift station and force main.

- Provide recommendations for updating the existing operation plan to account for new lift station and force main components.

- Determine the current condition of the existing pumps at the Lift Station and whether replacement and/or additional pumps are necessary.

- Assist in preparing exhibits for the City ROW agent to use in the procurement of any and all necessary easements/right-of-way to accommodate the force main from the Elk Vale Lift Station to the gravity system.

- Review the current condition of existing vortex manhole just south of the Elk Vale Lift Station and provide recommended rehabilitation if required.

- Coordination with the City’s SCADA contractor, Dakota Pump Inc., to ensure proper system integration for project upgrades. Engineer to provide operational narratives,
input/output (I/O) and operational requirement in the project plans and specifications. Engineers design will include items up to a terminal strip to be constructed/supplied by the awarded contractor. Everything beyond the terminal strip will be constructed/supplied by the City SCADA consultant and shown as “Provided by Others” in final plans.

Tasks 1 through 3 presented in this Exhibit are standard items requested by the City of Rapid City. Task 4 Basic Construction Services and Task 5 Expanded Construction Services will be completed under separate agreement and/or future amendment to the contract.

**TASK 1 - PRELIMINARY DESIGN SERVICES:**

1.1 **Project Initiation Workshop:** A project initiation workshop will be held with the Engineer’s Project Team and City of Rapid City staff. The project initiation workshop will cover the overall project scope, project scheduling including establishing progress meetings and updates, project procedures manual, project management activities, document control, and QA/QC guidelines. Engineer’s Project Team in attendance will include Project Manager, Assistant Project Manager, QA/QC Reviewer, Lift Station Engineer, and Force Main Engineer.

1.2 **Review of Background Information:** Gather and review background information listed in the Request for Proposals and any other resources as necessary.

1.3 **Force Main Alignment Evaluation:** Complete a desktop analysis of potential force main alignments options using City provided LiDAR data.

   A. Prepare a draft Technical Memorandum summarizing the potential force main alignments. A meeting shall be set after appropriate review from the City to collect comments and finalize the Technical Memorandum.

   B. A summary of the alignment options and a recommend option will be submitted in a Force Main Alignment Technical Memorandum.

1.4 **Hydraulic Evaluation:** The Hydraulic Evaluation will develop current and future design flow rates based on background information and City input.

   A. Develop current and future design flow rates based on existing background and City presented information.

   B. Develop a computer model of the proposed force mains. Use the model to evaluate if dual 16-inch force mains will be sufficient, provide list of benefits and weaknesses for this size force main, accounting for the diurnal variation in inflow to the lift station and the operation of the lift station pumps. Use the model to assist in evaluation of the size of the existing wet well compared to the projected flows.
C. Complete hydraulic analysis of gravity mains, including pipe sizing and slopes including review of potential downstream collection system limitations due to increased force main capacity and projected changes to the existing sewer basin.

D. Analyze the transients (surge events) that occur when the pumps turn on and off, to establish the maximum pressures in the pipe, using the computer model. The transient analysis allows for optimum location and sizing of air release/vacuum valves to limit the potential for pipe damage in the system. The analysis will include numerous flow scenarios, including peak hour, low flows at night, and rapid flow rate changes from valve closure and power loss.

E. Evaluate the existing surge anticipator valve. This will be done using primarily data collected at the existing pump station (pressure, time to start and stop pumps, etc.) and manufacturers recommendations for sizing.

F. Evaluate both PVC and HDPE to determine if suitable pipe materials for force mains. Prepare preliminary specifications for force main materials.

G. Evaluate the operational characteristics of the existing pumps in comparison to the future system demands. The computer model will be used to make recommendations for appropriate operation of the multiple pumps in the lift station. An extended period simulation will be completed to evaluate different start and stop points for the pumps. This evaluation will also be used to estimate the average and maximum length of time that sewage is in the lift station and in the force main before it is discharged into the gravity line, to assist identifying needs for odor control.

H. Evaluate the need for additional pump capacity and the capacity of the existing pumps. If additional pumps are required, a contract amendment will be submitted to provide Preliminary Design and Final Design including plans and specifications and also including associated electrical work.

I. Evaluate the required capacity of the gravity lines based on the peak flows from the extended period simulation of the force main. This evaluation will include the open channel capacity of each pipe but will also consider the potential for backwater due to changes in slope and pipe size.

J. Prepare draft Technical Memorandum summarizing the Hydraulic Evaluation described above. A meeting shall be set after appropriate review from the City to collect comments and finalize the Technical Memorandum.

1.5 Odor & Corrosion Control Evaluation: Based on the determined detention times, from the Hydraulic Analysis; review the existing Lift Station, Force Main, and Gravity System for Odor Control (specifically hydrogen sulfide) capabilities and needed corrosion protection measures. Based off this review, recommend modifications, as appropriate.

Prepare a Tech Memo summarizing the Odor and Corrosion Control Strategy for the Lift Station, Force Main and Gravity System.
1.6 **Geotechnical Report**: A geotechnical report evaluating the initial geotechnical investigation, field and laboratory test results to be included in the conceptual design report. Professional interpretations of exploratory and test data shall be included. The evaluation shall be based on the design, including pipe size, location, and loading of pipes and extent of excavations; and shall consider both design parameters and constructability. At a minimum, the geotechnical investigation is to include soil classifications, N values, water levels, proctors, CBR’s, resistivity tests, and testing recommendations.

The report shall indicate the anticipated performance of the subsurface material to be encountered on the project both during and after construction, under the loading conditions, use, and types of excavations anticipated.

1.7 **Site Survey**: During the preliminary engineering phase of the project, a site survey will be completed along the proposed force main and gravity line routes. The survey will gather information such as the location of existing utilities and other surface features. The survey shall be tied to at least two City of Rapid City Monument Control system monuments utilizing NAD83 (2011) South Dakota State Plane South Zone. The elevation datum will be the North American Vertical Datum of 1988 (NAVD88).

Detailed survey limits will include the applicable street rights-of-way and applicable adjacent property frontage with added areas necessary to establish adequate utility infrastructure.

1.8 Develop and distribute a survey questionnaire to affected property owners adjacent to proposed construction area. Survey questionnaire may be coordinated in conjunction with the site survey to provide property owner’s prior notice of surveying actions.

1.9 The Conceptual Design Submittal shall generally consist of the following documents:

A. Conceptual Design Report

- Prepare a Conceptual Design Report: The report will establish and indicate project specific design criteria and standards within the Conceptual Design Report (including ADA requirements). Include all design assumptions for pipe sections, sizes, design life, design criteria, and reference of design resources, etc.. Engineer shall use the City Infrastructure Design Criteria Manual, Supplemental Criteria (Included in Attachment Seven), the Recommended Design Criteria Manual for Wastewater Collection and Treatment Facilities (SDDENR, March 1991 Edition) and the Recommended Standards for Wastewater Facilities (Wastewater Committee of the Greater Lakes, 2014 Edition, also known as the 10 State Standards) to establish design criteria and standards.
• The project’s geotechnical report shall be included within the Conceptual Project Design Report and include soil classifications, N values, water levels, proctors, CBR’s, resistivity tests, and testing recommendations.

• Investigate the current condition of the existing pumps and recommend replacement and/or rehabilitation plans. If pumping modifications are required, an amendment will be submitted for pump design and specifications, as well as associated electrical work with new pumps.

• Assess the current surge anticipator valve for functionality and compatibility with proposed force main sizes.

• Review of the existing oxygen delivery system with proposed force main operations. Engineer to prepare technical specification.

• Evaluation and incorporation of rehabilitation recommendations of the existing vortex manhole (City Facility ID K5-98) south of the Elk Vale Lift Station.

• Evaluation and incorporation of ice pigging stations, as deemed necessary, on the new force main for future ice pigging operations.

• A probable opinion of construction costs for the project(s) shall be included. The costs shall be itemized based on the City’s standard bid items and appropriate contingency item allowance.

• Review of compliance with City’s Standard Specifications for construction of the project(s) including sections 8A and 8B.

• Identify the existing right-of-way (ROW) and easement location and any ROW or easements necessary for the Project. Include size and extent of such ROW and easements and contact information of property owners.

• Submit two (2) copies and a PDF version of the Conceptual Design Report and preliminary plans and specifications to City of Rapid City’s project manager for review and comment. Preliminary Plans and Specifications will include separate force main and lift station facility packages.

B. Conceptual Drawings. Provide two (2) copies and a PDF version of the conceptual drawings. The conceptual drawings shall contain the following sheets:

• Cover Sheet – Note the index of Sheets indicating the anticipated drawing sheets shall be provided.

• Survey Control Sheet – The Survey Control sheet shall include control points with Northing, Easting, Elevation, and Description with Station and Offset to the closest alignment. Horizontal alignments including beginning and end stations, and deflections and curve data. Combined ground to grid scale factor and Basis of Bearings.

• Anticipated traffic control phasing and erosion control measures.

• Property Layout and Land Ownership.
• Plan and Profile Sheets - Show existing and proposed utility mains and existing services, storm sewers, driveway locations, fittings, and proposed surfacing and drainage items. The utilities should be shown in profile as well. Design Criteria elements like profile grades, should be included.

• Anticipated Rapid City Standard Details.

• Special Details - Conceptual layouts for special/critical elements for example, pump facilities, etc.

• Plan sheets shall be prepared utilizing the latest City of Rapid City Drafting Standards. Use current City-provided drawing templates.

1.10 Attend submittal review meeting with City staff. Project Manager and Assistant Project Manager will attend in person, other team members will be available via video or teleconference.

1.11 Meet with City and individual property owners regarding ROW and permanent and temporary easement needs. Additionally, specific project issues and components shall be discussed.

1.12 Private Utilities Base Plan Verification Meeting. Engineer shall send base plans to the private utilities requesting verification that their utilities are shown correctly per their records. A meeting with the private utilities shall be scheduled after submitting plans to verify that the utilities are shown correctly and to make plan revisions as needed.

TASK 2 - FINAL DESIGN SERVICES

2.1 Address City comments from the Task 1 City review(s) and finalize Conceptual Design Report. The Conceptual Design Report should be now titled “Project Design Report”.

2.2 Provide project layout to include lot lines (front and side) and addresses of all properties (adjacent to construction, or alternatively, in service area). Identify if property is owner occupied or a rental.

2.3 Determine removal limits with approval of City of Rapid City representative.

2.4 Coordinate with the geotechnical engineer to complete these services and provide a geotechnical report to be included in the Project Design Report and project plans or specifications.

2.5 Incorporate design features from City review comments as necessary to meet the requirements outlined in the Project Design Report, including ADA compliance items. Applicable ADA requirement shall be outline in the Project Design Report.
2.6 Provide a complete stormwater pollution prevention narrative which will include detailed erosion and sediment control measures and specifications. Provide a complete erosion and sediment control site plan which includes station and offset locations for each implemented measure. Include both temporary and permanent erosion and sediment control measures. Include an erosion and sediment control sequence of implementation and phasing schedule. Each erosion control item shall be bid separately.

2.7 Provide detailed traffic control plans showing all devices required for a MUTCD compliant plan. Show all streets and alleys that may be impacted by this project. Show all existing signage, pavement markings, etc. All work zones, road closures, lane closures, and pavement marking removals shall be indicated on the plan. A detailed layout will be included for each phase of multi-phased projects. The traffic control sequence of implementation and phasing schedule shall coincide with erosion and Sediment control sequence of implementation and phasing schedule. Each traffic control device shall be bid separately. The City will provide an electronic version of an aerial photo for the selected Engineer’s use.

2.8 Provide a Project Sequence of implementation and phasing schedule which shall include such items as traffic control, erosion and sediment control, utility installations, paving, restoration, and construction milestones.

2.9 Engineer shall create a detailed list of all potential utility conflicts caused by the project. City Project Manager shall schedule the Private Utility Coordination Meeting. Engineer shall prepare the meeting agenda and include the list of utility conflicts for discussion at the meeting. If a private utility intends to replace their infrastructure, Engineer shall coordinate a location corridor for the utilities and show the proposed location on the drawings. Indicate if the private utilities intend to abandon or replace the infrastructure prior to or during this project’s construction. Coordinate directly with utility companies’ engineering divisions to ensure that all existing utilities are completely and accurately identified and located in the field; that pertinent information regarding depth, material, size, etc. are noted on the plans; and that conflicts requiring relocation of utilities or special construction techniques are fully specified in the contract documents. Prior to the meeting, preliminary plans shall be provided to the pertinent utilities for comment at the time they are complete. The Engineer shall document the resolution of each utility conflict agreed upon by each utility company.

2.10 Provide the City Project Manager a list of all private utility conflict resolutions. If private utilities will need to be relocated, assist PM as necessary with formal notification.
2.11 Provide detailed specifications supplementing the City of Rapid City Standard Specifications, as necessary. Typically, project drawing specific issues should be indicated as a General Note on the drawings. Material types and material specific items would be included as a detailed specification.

2.12 If desiring exemptions from City requirements or specifications, Engineer shall request comment from the City. Failure by the City to comment on a non-conforming item during a review does not constitute the granting of an exception.

Secured exceptions to the Standard Specifications shall be documented on the General Notes sheet of the construction plans. The table shall include the following:

A. City Exception File Number
B. Specification Section
C. Description
D. Stipulations

2.13 Provide 65% complete plans and specifications for a unit price construction contract. Plan sheets shall be prepared utilizing the latest City of Rapid City Drafting Standards. 65% Plans and Specifications will include separate force main and lift station facility packages.

2.14 Attend 65% submittal review meeting with City staff. Project Manager and Assistant Project Manager will attend in person, other team members will be available via video or teleconference.

2.15 Address City comments from the Task 2.14.

2.16 Provide 100% complete plans and specifications for a unit price construction contract. Plan sheets shall be prepared utilizing the latest City of Rapid City Drafting Standards. 100% Plans and Specifications will include separate force main and lift station facility packages.

A. Plan documents shall adhere to current City of Rapid City guidelines.
B. Staking information shall include:
   • Station offsets and required grades for all items of work requiring field staking.

2.17 Attend 100% submittal review meeting with City staff. Project Manager and Assistant Project Manager will attend in person, other team members will be available via video or teleconference.
2.18 Work with the City’s Agent to complete the following tasks: obtain property owner contact information, prepare easement and ROW exhibits as necessary, provide copies of current deeds of properties where easements are needed, assist with property owner meetings for easement and ROW acquisition as needed.

2.19 Provide two (2) copies and a PDF version of the finalized Project Design Report.

2.20 Provide two (2) copies and a PDF version of the Final Design Services submittal. The submittal shall consist of complete plans, specifications, contract documents, and opinion of probable construction cost to the City of Rapid City’s project manager for review. The Final Design Services submittal will be made to the City when Engineer believes the plans, specifications, contract documents, and opinion of probable construction cost are 100% complete.

2.21 Address 100% submittal staff comments as necessary.

2.22 All submittals (drawings and specifications) believed by the Engineer of Record to be a final, shall contain a Certification Statement of Conformance with City Standards which shall read, “I (insert Engineer of Record’s name) Certify that I have read and understand the provisions contained in the City of Rapid City Standard Specifications for Public Works Construction, current edition and the City of Rapid City’s adopted Design Criteria Manuals. The drawings and specifications contained here within, to the best of my knowledge, were prepared in accordance with these documents or a properly executed exception to the Standard Specifications and/or Infrastructure Design Criteria Manual has been secured”. This statement shall appear on the title sheet of the drawings and on the first page of specifications after the cover sheet. The “Certification Statement of Conformance with City Specifications” shall be signed and dated by the Engineer of Record.

2.23 Prepare any and all permits with exhibits the City will need to execute for the project.

2.24 Identify permits that will be required for the Contractor. Identify permit costs and indicate if any permit costs are paid for directly by the owner or if it is a Contractor cost. Typically, all permit costs are the Contractor’s obligation except as indicated in the City’s contract front end documents.

2.25 Prepare final “Engineer’s Estimate” of probable construction cost for the project.

2.26 Deliver the following:

   A. Provide one (1) copy and a PDF version of bid documents including complete plans, specifications, and Engineer’s Estimate of probable construction cost to the City of Rapid City’s project manager for City distribution. Submittal will include separate force main and lift station facility packages.
B. Provide complete plans on CD compatible with AutoCAD Release 2020 (Release currently used by the City) or newer format.

C. Provide all topographic, control, and design points in the .dwg file and in a tabular format, both on CD and on hard copy printout.

D. Provide complete specifications and contract documents on CD in Microsoft Word XP or previous versions.

E. Provide a unit price cost estimate on CD in Microsoft Excel XP or previous version on the City of Rapid City “Engineer’s Estimate” form.

F. Provide Engineer’s Estimate of probable construction costs as a component of this submittal.

G. Provide all final design documents in PDF format on a CD.

2.27 Address any comments or corrections required for approval from the Department of Environment and Natural Resources based upon the City will submitted plans and specifications

2.28 Assist the City in securing the bond to pay for this project.

TASK 3 - BIDDING SERVICES:

3.1 Submit information to the City of Rapid City project manager for completion of City Advertising Authority form.

3.2 Arrange and conduct a Pre-bid Conference, prepare an agenda and record attendance and minutes. Distribute copy of minutes to City.

3.3 Prepare and issue addenda to the bid documents as required.

3.4 Attend Public Works Committee and Council Meetings as required.

3.5 Review Bidder’s Proposals and review and sign the City Engineering Services prepared Bid Tab and prepare an award recommendation letter to the City of Rapid City project manager.

3.6 Prepare “As Built” plans and specifications. A hard copy of “As Built” plans and specifications shall be submitted to the City in the same size and format as construction plans. Additionally, provide PDF’s and CAD files on a CD or DVD. The digital submittal must be compatible with AutoCAD Civil 3D 2011, or newer, and contain all files and data packaged in a format that will allow City personnel to seamlessly open “As Built” drawings. Engineer will work with the City CAD technician, in person, to demonstrate the CAD file operation and compatibility with City CAD software. If hired for Tasks 4 and 5, “As Built” plans and specifications shall be
provided thirty (30) days following project acceptance. However, if not hired for Tasks 4 and 5, “As Built” plans shall be provided thirty (30) days following the receipt of City markups/redlines. AE2S will be paid for this work in advance, on the last invoice, but is required to complete the work at a later date per the contract, even if the AE2S has billed 100% of the contract and the City has closed the contract.

A. All “As Built” plans and specifications, believed by the Engineer of Record to be a final, shall contain a Certification Statement of Conformance, which shall read, “I (insert Engineer of Record’s name) Certify that the As Built drawings and specifications contained here within, to the best of my knowledge, represent the constructed project. This statement shall appear on the title sheet of the drawings and on the first page of specifications after the cover sheet. The “Certification Statement of Conformance” shall be signed and dated by the Engineer of Record.

PROJECT TEAM, MEETINGS, AND SUBMITTALS:

Project team members will include:

- Advanced Engineering and Environmental Services, Inc. (AE2S)
- City Engineering Services staff
- Operations Division Staff
- Utility Maintenance Division (Service area and O&M related issues)
- Water Reclamation Division

Engineer will attend the following meetings:

- Project Initiation Workshop, Task 1
- Private Utility Base Plan Verification Meeting, Task 1
- Project Design Report and Preliminary Plans and Specifications submittal review meeting, Task 1
- Property Owner Meetings (coordination, easement acquisition), Tasks 1 and 2
- Private Utility Coordination Meetings, Task 2
- 65% Plans, Specifications and Contract Documents Submittal Review, Task 2
- 100% Plans, Specifications and Contract Documents submittal review, Task 2
- Final Plans, Specifications and Contract Documents submittal review, Task 2
- Prebid Conference, Task 3

Engineer will make the following submittals:

- Project Initiation Workshop Minutes, Task 1
- Force Main Alignment Technical Memorandum, Task 1
- Hydraulic Analysis Technical Memorandum, Task 1
• Odor & Corrosion Control Technical Memorandum, Task 1
• Preliminary Design Services Submittal, Task 1
• Final Project Design Report, Task 2
• Final Design Services Submittal, Task 2
• Property owner meeting minutes, Task 2
• 65% submittal of bid documents including complete plans, specifications, contract documents, and Engineer’s Estimate of probable construction cost, Task 2
• 100% submittal of bid documents including complete plans, specifications, contract documents, and Engineer’s Estimate of probable construction cost, Task 2
• Final submittal of bid documents including complete plans, specifications, contract documents, and Engineer’s Estimate of probable construction cost, Task 2
• Pre-bid conference meeting minutes, Task 3
• Bid Tab and Award Recommendation, Task 3
• As-Builts, Task 3

The Engineer will allow 15 working days for City review of the Project Design Report and Preliminary Design Services Submittal and the Final Design Services Submittal.

**SCHEDULE:**

Draft Preliminary Design Report Submittal – February 7, 2020
Final Design Report Submittal – March 6, 2020
65% Plans and Specifications Submittal – June 26, 2020
65% Plans and Specifications Review Complete – July 17, 2020
100% Plans and Specifications Submittal – September 4, 2020
100% Plans and Specifications Review Complete – September 25, 2020
Final Plans and Specifications Submittal – October 2, 2020
Bid Opening – November 2020
Project 100% Constructed – November 2022
### TASK 1 - Preliminary Design

<table>
<thead>
<tr>
<th>TASK</th>
<th>Task Description</th>
<th>Task Cost</th>
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<td>1.1</td>
<td>Project Initiation Workshop</td>
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<td>1.2</td>
<td>Review of Background Information</td>
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<td>1.3</td>
<td>Force Main Alignment Evaluation</td>
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<td>1.4</td>
<td>Hydraulic Evaluation</td>
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<td>1.5</td>
<td>Odor &amp; Corrosion Control Evaluation</td>
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<td>1.6</td>
<td>Geotechnical Report</td>
<td>$1,980.00</td>
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<td>1.7</td>
<td>Site Survey</td>
<td>$12,660.00</td>
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<tr>
<td>1.8</td>
<td>Survey Questionnaire toAffected Property Owners</td>
<td>$2,884.00</td>
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<td>1.9</td>
<td>Conceptual Design Report and Drawings</td>
<td>$92,328.00</td>
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<td>1.10</td>
<td>Submittal Review Meeting</td>
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<td>1.11</td>
<td>Meet with City and property owners</td>
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<td>1.12</td>
<td>Private Utilities Plan Verification Meeting</td>
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<td>NTI - Geotechnical Subconsultant</td>
<td>$15,000.00</td>
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<td>Supplies, Mileage, Printing allowances</td>
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<td><strong>Subtotal Task 1 - Preliminary Design</strong></td>
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### TASK 2 - Final Design Services

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<tr>
<td>2.1</td>
<td>Address Submittal Comments</td>
<td>$12,608.00</td>
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<td>2.2</td>
<td>Project Property Layout</td>
<td>$7,940.00</td>
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<td>2.3</td>
<td>Removal limits with City</td>
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<td>2.4</td>
<td>Coordinate with Geotechnical Engineer, obtain report.</td>
<td>$1,034.00</td>
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<td>2.5</td>
<td>Incorporate design features.</td>
<td>$52,202.00</td>
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<td>2.6</td>
<td>Provide SWPPP drawings and specifications.</td>
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<tr>
<td>2.7</td>
<td>Provide traffic control plan drawings and specifications.</td>
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<tr>
<td>2.8</td>
<td>Provide a Project Sequence of Implementation Schedule.</td>
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<td>2.9</td>
<td>Provide a list of utility conflicts.</td>
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<td>2.10</td>
<td>Provide recommendations for utilities to be relocated.</td>
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<td>2.11</td>
<td>Provide detailed specifications.</td>
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<td>2.12</td>
<td>Obtain design exceptions, as required.</td>
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<td>2.13</td>
<td>65% Plans and Specifications</td>
<td>$32,088.00</td>
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<td>65% Plans and Specifications Review Meeting</td>
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<td>2.15</td>
<td>Address 65% Plans and Specifications</td>
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<td>2.16</td>
<td>100% Plans and Specifications</td>
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<td>Task Description</td>
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<td>2.17</td>
<td>100% Plans and Specifications Review Meeting</td>
<td>$4,152.00</td>
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<td>2.18</td>
<td>Work with City's Agent for Land Needs</td>
<td>$7,920.00</td>
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<td>2.19</td>
<td>Provide 2 copies and a pdf of Finalized Project Design Report</td>
<td>$2,572.00</td>
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<td>2.20</td>
<td>Provide final Plans, Specifications, Contract Documents and OPCC</td>
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<tr>
<td>2.21</td>
<td>Address 100% submittal staff comments</td>
<td>$4,152.00</td>
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<td>2.22</td>
<td>Final Submittal</td>
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<td>2.23</td>
<td>Prepare Permits and Exhibits for the City</td>
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<td>2.24</td>
<td>Identify Permits for the Contractor</td>
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<td>2.25</td>
<td>Prepare Final Engineer's Cost Opinion</td>
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<td>2.26</td>
<td>Final Deliverable Package</td>
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<td>2.27</td>
<td>Address DENR Review Comments</td>
<td>$1,102.00</td>
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<td>2.28</td>
<td>Assist the City in securing the project bond</td>
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<td>Supplies, Mileage, Printing allowances</td>
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<td><strong>Subtotal Task 2 - Final Design Services</strong></td>
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<table>
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<tr>
<th>TASK</th>
<th>Task 3 - Bidding Services</th>
<th>Task Cost</th>
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<tbody>
<tr>
<td>Pre-Bidding Administration</td>
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<tr>
<td>3.1</td>
<td>Submit info to Rapid City Project Manager</td>
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<td>3.2</td>
<td>Prebid Conference</td>
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<td>3.3</td>
<td>Prepare Bid Addendums</td>
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<td>3.4</td>
<td>Attend Public Works Meeting</td>
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<td>3.5</td>
<td>Review Bidders Proposals and Prepare Recommendation</td>
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<td>3.6</td>
<td>As-Built Documents</td>
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<td><strong>Subtotal Task 3 - Bidding Services</strong></td>
<td><strong>$24,798.00</strong></td>
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**TOTAL ESTIMATED FEES - Tasks 1, 2 and 3** | **$522,701.00**

Note: AE2S shall retain the right to reallocate task costs subject to the maximum limiting fee.
## Advanced Engineering and Environmental Services, Inc.

<table>
<thead>
<tr>
<th>Position Title</th>
<th>Labor Category</th>
<th>Hourly Billing Rate</th>
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</thead>
<tbody>
<tr>
<td>Project Manager – Dustin Dale</td>
<td>Engineer 4</td>
<td>$187.00</td>
</tr>
<tr>
<td>Assistant Project Manager – Joe Noble</td>
<td>Engineer 3</td>
<td>$165.00</td>
</tr>
<tr>
<td>QC Reviewer – Brent Erickson</td>
<td>Engineer 5</td>
<td>$199.00</td>
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<tr>
<td>Project Engineer – Kevin Johnson</td>
<td>Engineer 3</td>
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</tr>
<tr>
<td>Project Engineer – Mark Peterson</td>
<td>Engineer 5</td>
<td>$199.00</td>
</tr>
<tr>
<td>Drafting Technician – Michael Schille</td>
<td>Engineering Technician 4</td>
<td>$125.00</td>
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<tr>
<td>ROW/GIS – Justin Huntley</td>
<td>Engineer 3</td>
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<tr>
<td>Surveyor – Keith Peterson</td>
<td>Land Surveyor 1</td>
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<tr>
<td>Project Engineer – Jayme Klecker</td>
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<td>Project Engineer – Ben Julson</td>
<td>Engineer 3</td>
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<tr>
<td>Process Technician – Steve Seibert</td>
<td>Engineering Technician 6</td>
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<tr>
<td>Electrical Engineer – Damon Chmela</td>
<td>Engineer 8</td>
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<tr>
<td>Electrical Engineer – Kody Pataky</td>
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<td>Electrical Technician – Pete Manfredini</td>
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<td>I&amp;C Engineer – Jason Salber</td>
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<td>I&amp;C Technician – Michael Woessner</td>
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<td>Structural Engineer – Jordan Geiger</td>
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<td>Project Coordinator – Sandy Feickert</td>
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<tr>
<td>Variable</td>
<td>Engineer 1</td>
<td>$109.00</td>
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</table>

If project goes to 2021, Contract will be amended.

- Project Mileage:.................. $ 0.65/mile
- Project Mileage (3/4 Ton):....... $ 0.70/mile
- Project Travel (Other):.........Actual Cost
- In House B&W Printing:.......... $ 0.10/page
- In House Color Printing:........... $ 1.25/sf
- All Other Reimbursables:.......Actual Cost