TOWN OF SILT, COLORADO
RESOLUTION NO. 16
SERIES 2024

A RESOLUTION AUTHORIZING THE MAYOR OF THE TOWN OF SILT TO SIGN AN AMENDMENT TO THE AGREEMENT FOR PROFESSIONAL SERVICES BETWEEN THE TOWN OF SILT AND ROCKSOL CONSULTING GROUP, INC. EXTENDING THE SCOPE AND ALLOWABLE COMPENSATION TO INCLUDE WORK AND PAYMENT FOR PROFESSIONAL ENGINEERING SERVICES RELATED TO THE SILT I-70 BIKE AND PEDESTRIAN OVERPASS.

WHEREAS, Pursuant to the Agreement for Professional Services (the "**Agreement**") made between the Town and the RockSol Consulting Group on March 22, 2021, the Town authorized ongoing preliminary engineering design services for the Silt I-70 Bike and Pedestrian Bridge project.

WHEREAS, The Town and the Contractor desire to have the Contractor undertake additional engineering design work for the Silt I-70 Bike and Pedestrian Overpass.

WHEREAS, The Agreement does not expire and can be amended to add additional scope of services.

WHEREAS, The Parties desire to amend the Agreement to expand the scope and allowable compensation for professional engineering services related to the design and construction of the Silt I-70 Bike and Pedestrian Overpass.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF SILT, COLORADO:

1. The Town Council approves the First Amendment to Agreement for Professional Services attached as **Exhibit 1** and authorizes the Mayor or his designee to sign on behalf of the Town any and all documents required to reasonably ensure completion.

INTRODUCED, READ, APPROVED, ADOPTED AND RESOLVED this 25 day of March, 2024.

TOWN OF SILT, COLORADO

Name: Keith B. Richel
Title: Mayor

ATTEST:

By: _____
Name: Sheila M. McIntyre
Title: Town Clerk, CMC

TOWN OF SILT SEAL COLORADO

Exhibit 1

First Amendment to Agreement for Professional Services

[to be inserted]

FIRST AMENDMENT TO
AGREEMENT FOR PROFESSIONAL SERVICES

This FIRST AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES (this "**First Amendment**") is made and entered into as of March 25, 2024 ("**First Amendment Effective Date**") by and among the following (individually, a "**Party**: and, collectively, the "**Parties**"): the Town of Silt, Colorado, a home rule municipality (the "**Town**"), and RockSol Consulting Group, Inc., a New Mexico Corporation (the "**Contractor**").

RECITALS

This First Amendment is made with respect to the following facts:

A. Pursuant to the Agreement for Professional Services (the "**Agreement**") made between the Town and the Contractor on March 22, 2021, the Town authorized ongoing preliminary engineering design services for the Silt I-70 Bike and Pedestrian Bridge project.

B. The Town and the Contractor desire to have the Contractor undertake additional engineering design work for the Silt I-70 Bike and Pedestrian Overpass.

C. The Agreement does not expire but can be terminated by the parties for various reasons outlined in the Agreement.

D. The Parties desire to amend the Agreement to extend the scope and allowable compensation for professional engineering services related to the design and construction of the Silt I-70 Bike and Pedestrian Overpass.

AGREEMENT

NOW, THEREFORE, in consideration of the Recitals (which are incorporated in this First Amendment), the terms, conditions, and covenants set forth in this First Amendment, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Services**. Section 1 of the Agreement for Professional Services is amended to extend the scope of work to include professional services related to the design and construction of the Silt I-70 Bike and Pedestrian Overpass further described in and attached hereto as **Exhibit A-1**.

2. **Compensation**. Section 3 of the Agreement for Professional Served is amended to include compensation for the services outlined in the Silt I-70 Bike and Pedestrian Overpass Fee Detail and Fee Summary provided by the Contractor and attached, separately, hereto as **Exhibit B-1** for the construction of the Silt I-70.

3. **Effect of Amendment**. Except as expressly modified by this First Amendment, the Agreement is unmodified, is hereby ratified and affirmed, and will remain in full force and effect in accordance with its terms. If there is any inconsistency between the terms of this First Amendment and the terms of the Agreement, the provisions of this First Amendment will govern and control.

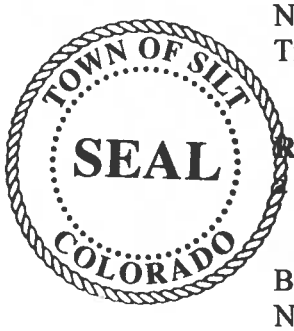
4. **Facsimile/Scanned Signatures/Counterparts**. Signatures may be evidenced electronically, by facsimile or a scan. A facsimile transmitted or scanned copy of this First Amendment (including a PDF) executed by a Party will be accepted as an original signature for all purposes. This First Amendment may be executed in several counterparts, each of which will be construed together as one original.

[Signature Pages Follow This Page]

IN WITNESS WHEREOF, the Parties have executed this First Amendment as of the First Amendment Effective Date.

TOWN OF SILT,
a Colorado home rule municipal corporation

By: _____
Name: KEITH B. RICHEL
Title: Mayor



ROCKSOL CONSULTING GROUP, INC.
New Mexico Corporation

By: _____
Name: Saeid Saeb
Title: President

EXHIBIT A

Town of Silt
I-70 Bike and Pedestrian Overpass
Engineering Design Services

SCOPE OF SERVICES DATE: February 9, 2024

PROJECT LOCATION: Town of Silt, Colorado

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SECTION 1
PROJECT SPECIFIC INFORMATION

1. PROJECT BACKGROUND

The Town of Silt, Colorado, has contracted RockSol Consulting Group to provide design and engineering services for a Town of Silt, Colorado Department of Transportation, and federally funded project. The project will include an elevated pedestrian and bicycle overpass that will span approximately 760 feet across Union Pacific Railroad, Interstate 70, and River Frontage Road. It will also include conceptual design to elements of the Silt interchange with Interstate 70 at mile marker 97 to ensure future potential interchange improvements are not precluded.

This scope of services includes preliminary engineering, final engineering, preparation of construction plans, specifications and bid documents. Grant application support may also be provided.

A conceptual design report for the project was completed in December 2022. A traffic study for the project was completed in April 2023. The Town of Silt was awarded a Transportation Alternatives Program (TAP) grant in June 2023 for the project preliminary and final engineering.The Town of Silt will seek other revenue sources to construct the project.

2. PROJECT AREA

This project is located in the Town of Silt, Colorado, and includes work at the I-70 Silt interchange. The bike/pedestrian overpass is expected to include design of improvements across the River Frontage Road on the south side and connections to Main Street (US 6) on the north side. The facility is intended to be a multi-modal facility that accommodates pedestrians and bikes. A vicinity map is shown below (red line is the approximate planned location of the pedestrian/bike overpass).

4. PROJECT COSTS

The construction cost of pedestrian/bike overpass is estimated at approximately $13,000,000 to $15,000,000 in December 2022. This amount does not include preliminary and final engineering, right of way plans, right of way acquisition costs, or construction engineering.

5. WORK DURATION

The time for the work described in this scope of services is approximately 18 months to complete preliminary and final engineering of the pedestrian/bike overpass. Additional time is needed for construction.

6. CONSULTANT RESPONSIBILITY AND DUTIES

The consultant is responsible for preliminary and final engineering, construction plan package for advertisement of the pedestrian/bike overpass. Advertisement bidding support and construction timeframes are subject to available funding.

The consultant shall perform the work in general accordance with Town of Silt Request for Qualifications (RFQ) for the project dated 9/1/2023 and the consultants RFQ response dated 9/25/2023.

7. WORK PRODUCT

The Consultant work products are:

A. Reports
   - Design Criteria Technical Memorandum
   - Pedestrian/Bike Overpass Span Configuration and Type Technical Memorandum

B. Preliminary Engineering (30%) Plans and Estimates (CDOT Field Inspection Review – FIR)

C. Final Engineering (90%) Plans, Specifications, and Estimates (Final Office Review – FOR)

D. Advertisement/Bid Plans, Specifications, Cost Estimate

E. Construction Plan Package

F. Project Coordination

G. Schedules

H. Meeting Summaries

Professional Engineer Stamped Record Sets and Design Support During Construction can be provided based on construction funding timeframes as additional work to this scope of work.

Requirements are further described in the sections that follow. All work required to complete this scope of services requires the use of English Units.

One hard copy and an electronic PDF of each work product shall be submitted to the Town of Silt.

8. WORK PRODUCT COMPLETION

All submittals must be submitted to and accepted by the Town of Silt.

SECTION 2
PROJECT MANAGEMENT AND COORDINATION

1. PROJECT MANAGEMENT

The Town of Silt project management will be performed by Trey Fonner.

Trey Fonner
Public Works Director
Public Works Department
Town of Silt
PO Box 70
Silt, CO 81652

Phone: 970.876.2353 ext. 106
Email: trey@townofsilt.org

The Consultant project management will be performed by Matt Wessell.

Matt Wessell
Senior Transportation Manager
RockSol Consulting Group, Inc.
12076 Grant Street
Thornton, CO 80241

Phone (office main): 303.962.9300
Phone (direct): 303.962.9338
Phone (cell): 303.895.7431
Email: wessell@rocksol.com

2. PROJECT COORDINATION

Coordination will be required with the following:

A. Cities (Town of Silt)
B. Counties (Garfield County)
C. Union Pacific Railroad
D. Intermountain Transportation Planning Region
E. U.S. Army Corps of Engineers (USACE)
F. Federal Emergency Management Agency (FEMA)
G. Colorado Department of Transportation (CDOT)
H. Federal Highway Administration (FHWA)
I. Roaring Fork Transportation Authority (RFTA)
J. Utilities
K. Colorado Department of Public Health and Environment (CDPHE)
L. Local Developers
M. Local Businesses
N. Other agencies, as needed in coordination with Town of Silt, CDOT, and FHWA

The consultant should anticipate that a design that affects another agency must be accepted by that agency prior to its acceptance by the Town of Silt. Submittals to affected agencies will be coordinated with the Town of Silt.

SECTION 3
EXISTING FEATURES

Note: This Section lists known features in the area. It should not be considered as complete, and should include, as appropriate, information from Section 2 Project Management and Coordination. The Consultant should be alert to the existence of other possible conflicts.

1. STRUCTURES

9th Street over I-70 (F-06-U)

9th Street over Union Pacific Railroad (F-06-T)

2. UTILITIES

Contact Utility Notification Center of Colorado (U.N.C.C.) at 1-800-922-1987 or 811

3. IRRIGATION DITCHES

None known as of 2/9/2024

4. RAILROADS

Union Pacific Railroad

5. PERMANENT WATER QUALITY CONTROL MEASURES

None known as of 2/9/2024

6. FLOODPLAINS

Colorado River

SECTION 4
GENERAL INFORMATION

1. NOTICE TO PROCEED

Work shall not commence until the written Notice to Proceed (NTP) is issued by the Town of Silt.

2. PERSONNEL QUALIFICATIONS

The Consultant Project Manager must be approved by the Town of Silt, including changes to the project manager. Certain tasks must be done by Licensed Professional Engineers (PE) or Professional Land Surveyors (PLS) who are registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors. National Institute for Certification in Engineering Technology (NICET) certification or other certifications may be required for project inspectors and testers.

All tasks assigned to the Consultant must be conducted by a person on the Consultant team that is qualified and has specific expertise in that task. The qualified person is a professional with the necessary education, certifications (including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task. Design of any special project features must be directed, completed, and overseen by a professional engineer with significant experience in design of those special project features.

2. COMPUTER/SOFTWARE INFORMATION

The consultant shall utilize the most recent software agreed to with Town of Silt.

A. Earthwork: Civil 3D or OpenRoads
B. Drafting/CADD: Civil 3D & AutoCAD or OpenRoads & Microstation, with similar formatting configurations and standards to CDOT
C. Survey/photogrammetry: CDOT TMOSS, Civil 3D or OpenRoads
D. Bridge check: CDOT Staff Bridge software shall be used in either design or design
E. Estimating: Microsoft Excel
F. Specifications: Microsoft Word
G. Scheduling: Microsoft Project

3. COMPUTER DATA COMPATIBILITY

The data format for submitting design computer files shall be compatible with the latest version of the adopted CDOT software as of Notice to Proceed for the contract. The Consultant shall immediately notify the Town of Silt if the firm is unable to produce the desired format for any reason and cease work until the problem is resolved.

4. PROJECT DESIGN DATA AND STANDARDS

The list below provides a list of state and federal reference material that may be applicable to this project and shall be used as design standards and guidance. The consultant is responsible for obtaining and ensuring compliance with the most recent CDOT-adopted version of the listed references including standards and specifications, manuals, and software, or as directed by the Town of Silt. Conflicts in criteria shall be resolved by the Town of Silt.

1. **AMERICAN ASSOCIATON OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) PUBLICATIONS** (using latest approved versions):
    - A. A Policy on Design Standards-Interstate System
    - B. A Policy on Geometric Design of Highways and Streets
    - C. Guide for Design of Pavement Structures
    - D. Standard Specifications for Highway Bridges
    - E. Guide for the Development of Bicycle Facilities
    - F. Guide for the Planning, Design, and Operation of Pedestrian Facilities
    - G. Standard Specifications for Transportation Materials and Methods of Sampling and Testing – Part 1, Specifications and Part II, Tests
    - H. Highway Design and Operational Practices Related to Highway Safety
    - I. Roadside Design Guide
    - J. Load Resistance Factor Design (LRFD) Specifications
2. **COLORADO DEPARTMENT OF TRANSPORTATION PUBLICATIONS** (using latest approved versions):
    - A. Design Guide (all volumes)
    - B. Bridge Design Manual
    - C. Bridge Detailing Manual
    - D. Bridge Rating Manual
    - E. Project Development Manual
    - F. Erosion Control and Stormwater Quality Guide
    - G. Field Log of Structures
    - H. Cost Data Book
    - I. CDOT Traffic Analysis and Forecasting Guidelines
    - J. Drainage Design Manual
    - K. Landscape Architecture Manual

L. NEPA Manual

M. Environmental Stewardship Guide

N. Various CDOT Environmental Resource Guidance (i.e., Air Quality, Hazardous Materials, Noise, Visual)

O. Quality Manual

P. Survey Manual

Q. Field Materials Manual

R. Standard Plans, M & S Standards

S. Standard Specifications for Road and Bridge Construction and Supplemental Specifications

T. Item Description and Abbreviations (with code number) compiled by Engineering Estimates and Market Analysis Unit ("Item Book")

U. Right-of-Way Manual

V. The State Highway Access Code

W. Utility Manual

X. TMOSS Generic Format

Y. Field TMOSS Topography Coding

Z. Topography Modeling Survey System User Manual

AA. Interactive Graphics System Symbol Table

3. **CDOT PROCEDURAL DIRECTIVES** (using latest approved versions):

A. No. 27.1 Social Marketing – Use of Web 2.0 and Similar Applications

B. No. 31.1 Web Site Development

C. No. 501.1 Requirements for Storm Drainage Facilities and Municipal Separate Storm Sewer System Facilities

D. No. 503.1 Landscaping with CO Native Plant Species and Managing the CO Pollinator Highway

E. No. 514.1 Field Inspection Review (FIR)

F. No. 516.1 Final Office Review (FOR)

G. No. 1217a Survey Request

H. No. 1304.1 Right-of-Way Plan Revisions

I. No. 1305.1 Land Surveys

4. **FEDERAL PUBLICATIONS** (using latest approved versions):

   A. Manual on Uniform Traffic Control Devices

   B. Highway Capacity Manual

   C. Urban Transportation Operations Training – Design of Urban Streets, Student Workbook

   D. Reference Guide Outline – Specifications for Aerial Surveys and Mapping by Photogrammetric Methods for Highways

   E. Executive Order 12898

   F. Executive Order 11988 & 13690 FHWA Federal-Aid Policy Guide

   G. FHWA NHI Hydraulic Circular (HEC) and Hydraulic Design Series (HDS) Reports

   H. Technical Advisory T6640.8A

   I. U.S. Department of Transportation Order 5610.1E

   J. Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques

   K. ADAAG Americans With Disabilities Act Accessibility Guidelines

   L. 23 CFR 771, the FHWA Technical Advisory T6640.8A

   M. 44 CFR 59-72, standards of the National Flood Insurance Program (NFIP)

   N. U.S. Army Corps of Engineers Wetlands Delineation Manual of 1987 and appropriate regional supplements

5. **OTHER:**

   A. American Railway Engineering and Maintenance-Of-Way Association (AREMA) – Manual for Railway Engineering

   B. Union Pacific Railroad Guidelines for Railroad Grade Separation for Projects

   C. Any appropriate local agency reference as appropriate

SECTION 5
SCOPE OF SERVICES FOR PROJECT MANAGEMENT AND COORDINATION

Project Management and Coordination

a. Town coordination and progress meetings – Facilitate communication with the Town of Silt staff to ensure project meets town standards. This includes bi-weekly project management coordination phone calls, monthly progress meetings, and up to 5 in-person trips for meetings directly with the Town of Silt.
b. Project schedule – Develop a detailed schedule for the design process. This should include agreed upon coordination dates with CDOT and UPRR as well as submittal dates with the Town. Provide schedule updates in coordination with the Town of Silt
c. CDOT coordination – Facilitate communication with CDOT to ensure project meets standards.
d. UPRR coordination – Facilitate communication with UPRR to expedite permitting process for the railroad.
e. Quality – Ensure quality assurance/quality control (QA/QC) is implemented as part of the project work products and commit to adhering to QA/QC process throughout the project.

Public Involvement

a. Reach out to local agencies and residents to inform them of the upcoming project and receive input on their perspective.
b. Prepare project specific Public Involvement Plan (Assumes one round of minor comments and one associated revision of the Public Involvement Plan)
c. Website development, social media and news ads (two ads for each public meeting, published in the Post Independent). The consultant shall host the website. The Town will assist with distribution of public meeting notices through its electronic network.
d. Prepare and conduct two public meetings. Anticipate one virtual meeting and one in-person meeting.
e. Stakeholder meetings – Stakeholder meetings are assumed to be conducted by phone/email/video call or in conjunction with scheduled site trips. Two, in-person trips are included within this task. Ten meetings are included.

Funding and Grant Writing

a. Funding Support – Support Town of Silt efforts for grant identification and pursuit process, including:
    i. Researching grant opportunities at the state and federal level
    ii. Assessing how competitive the client is for the grants identified
    iii. Providing information to the Town to support Town applications such as graphics, text, and analysis
b. Grant Application Development (Not included, by amendment only)
    i. Work with the Town and other project stakeholders to develop grant application packages. Application development may involve collaboration with stakeholders and coordinating assignments amongst the project team. Grant application development includes grant writing, preparation of supporting materials, and website development. Final electronic copies of the application will be provided once application(s) are complete. The Town is responsible for application submittal. Primary grant application tasks include the following:
        - Writing narrative
        - Research and data collection
        - Letters of Support
        - Website setup and maintenance
        - Graphic design coordination
        - Correspondence with granting agency
        - Attending webinars
        - Subconsultant oversight

SECTION 6
SCOPE OF SERVICES FOR PRELIMINARY ENGINEERING
(Schematic Design – 30%)

1. Survey
    a. Surveys will be conducted in accordance with the CDOT Survey Manual, the latest addendum thereof, and applicable state statutes. Work shall be performed under the responsible charge of a Colorado licensed PLS. Work shall use previous and available survey to the extent practical.
    b. Pre-survey meeting. A pre-survey meeting shall be held to coordinate with the design team for survey needs. The consultant shall coordinate and attend the presurvey meeting prior to any right of way or survey work. CDOT Form 1217a is an outline of a complete survey request and can be used as a guide for completing survey.
    c. Survey Data Research. Research shall be done as per current CDOT manuals.
    d. Project Control Survey
        i Locate or Establish HARN Stations. Project control shall be tied to the nearest Colorado High Accuracy Reference Network Station (HARN). In the event there are no HARN stations within 3 miles of the project (Order B, 1:1,000,000 accuracy), or HARN Densification (Order B-2, 1:500,000 accuracy), additional HARN Densification stations shall be set. NGS Blue Book procedures shall be followed for all HARN Densification stations. This will include proper spacing using proper monumentation, equipment, observation procedures, coordination through the Colorado State Geodetic Advisor and submission to NGS for inclusion in the National Database.
        ii No monumentation is anticipated to be set.
        iii Local Project Control. Survey the required project control (centerline/baselines and elevation reference) as required. Prepare a control survey diagram showing graphical representation of all monuments used for control. Tabulate coordinates and physical descriptions of all found monuments and other physical evidence.
    e. Land Survey/Boundary Survey. Tie aliquot, property and other land monuments to the control survey. Prepare a Land Survey Control Diagram showing graphical representation of all found aliquot, property and land monuments and their relationship to the project control. Tabulate the coordinates and physical description of all found monuments and other physical evidence.
    f. Topographic Survey. Collect the data required to produce a planimetric map. Features located will include, but not be limited to signs, mailboxes, fences, driveways, curb cuts, curbs, sidewalks, and edges of pavements. Horizontal accuracy shall be as specified for a CDOT class C or D TMOSS survey.
    g. Terrain Survey. Collect elevation data. Develop terrain model with one-foot contours.
    h. Utility Survey. Locate utility poles, manholes, valves, pedestals, guy wires, and other visible utility features. Survey underground utilities as marked by the utility companies or private utility designators. Determine invert elevations of manholes

and vaults and survey the locations of utility test holes. Coordinate with utility staff for exposed utilities by test hole as needed.

i. Supplemental Survey. Provide survey over the course of design development as required and specifically requested.

2. Traffic Engineering
    a. Review the project area for potential crash reduction using available traffic operations analysis and or the safety assessment report to determine which safety improvements will be incorporated into the project.
    b. Analyze the proposed project design with the traffic projection data.
    c. Recommend the appropriate geometry (i.e., number of lanes, auxiliary lanes, storage lengths, weaving distances, etc.) in accordance with the current version of Highway Capacity Manual.
    d. The proposed design shall be reviewed to ensure compatibility with existing signing procedures throughout the preliminary roadway design process, including parking lot/wayfinding.
    e. Use traffic data appropriate to the anticipated construction timing in developing detour alternatives.
    f. Develop the total ESAL for the design life and submit to the Town of Silt for the pavement design.
    g. Determine compatibility with future multi-modal uses.
    h. Determine pedestrian safety and connection considerations at US 6/Main Street and 7th Street intersection. Develop in coordination with other pedestrian crossings along US 6/Main Street.
    i. Submit a traffic memorandum to document considerations taken during preliminary design to the Town of Silt PM for review. This will not include the future interchange design.

3. Materials Engineering
    a. A preliminary soil investigation should be conducted.
    b. Determine boring locations (horizontal and vertical) and coordinate with the Town of Silt PM.
        i Pedestrian bridge soil borings will be conducted at each of the seven (7) pier locations and one at each loop ramp, for a total of nine (9) borings.
        ii Pavement soil borings will be conducted at five (5) locations support frontage road relocation, parking lot design, and US 6/7th Street intersection improvements.
        iii Retaining wall borings will be conducted at two (2) locations for potential retaining wall on the south side of the parking lot.
    c. Collect soil samples and test for:
        i Classification
        ii Moisture – Density Relationship
        iii Resistance Value
        iv Corrosiveness – Note locations of high corrosiveness with recommendations; see CDOT pipe material selection policy.
        v Bearing Capacity

d. Prepare and submit a soils investigation report.
e. Prepare and submit pipe material selection report.

4. Pavement
    a. New Pavement Structure – Frontage Road and Parking Lot
    The feasible alternatives of new pavement structure shall be designed utilizing procedures accepted by CDOT and Town of Silt. New pavement designs for the frontage road and parking lot shall be compatible with adjacent rehabilitated existing pavement.
    b. Pavement Justification
        i Basic factors:
            (1) Desired life expectancy (obtain design life from CDOT).
            (2) Required maintenance activities intervals.
            (3) Basis for performance life.
        ii Analyze life cycle cost of the selected alternatives
            (1) Perform analysis with unit and maintenance costs from CDOT. Determine present worth and annual costs in accordance with the procedures in the CDOT Pavement Design Guide.
            (2) Compare alternatives over the same life span.
            (3) Recommend the pavement structure and provide the basis for the recommendations.
    c. Pavement Design Report
    Include all the above tests, investigations, analyses, and calculations performed. Submit to the Town of Silt and CDOT for acceptance.

5. Hydrology/Hydraulic Engineering
    a. Data Collection and Hydrology
        i Establish drainage basin data: delineate and determine size, waterway geometrics, vegetation cover, and land use.
        ii Collect historical data: research flood history and previous designs in the project proximity; obtain data from other sources (e.g., MHFD, CWCB, CDOT Maintenance, and local residents).
        iii Complete a project site visit to evaluate channel/overbank roughness coefficients, channel stability, vegetation, condition/adequacy of existing structures, Ordinary High Water, allowable high water, etc. Document the site visit with photos.
        iv Select a design storm frequency based on the established criteria.
        v Complete a hydrological analysis using existing studies or approved methods.
        vi Perform a risk analysis.
    b. Hydraulics
        i Complete preliminary design of minor drainage structures:
            (1) Determine locations, sizes, and alignment based on preliminary hydraulic design. Identify locations by highway station or coordinates, as appropriate.
            (2) Determine the allowable headwater.

(3) Assess the degree of sediment and debris problems to be encountered.
(4) Assess abrasion and corrosion levels based on CDOT Pipe Material Selection Policy.
(5) Prepare preliminary structure cross-sections and determine elevations, flow lines, slopes and lengths of the structures.
(6) Present initial designs of any necessary deck drainage or other drainage off the structure.

ii Complete preliminary design for Permanent Water Quality Control Measures (PWQ CMs) and outlet structures with details as needed. Adequate detail should be included in the FIR construction plan set if FIR-level decisions are required with respect to right-of-way, easements, maintenance, etc. to move to final design.

c. Prepare preliminary construction plans that include:
   i Drainage Plan Sheets
   ii Drainage Detail Sheets as needed
   iii Hydraulic Information Sheets as needed
d. Prepare a Preliminary Drainage Report in accordance with the CDOT Drainage Design Manual
   i Introduction, Hydrology, Existing Structures and Design Discussion sections should be close to final at this level. Design Discussion should include CDOT and local criteria the project intends to meet.
   ii Recommended design should be preliminary at this level and progress through final design.
   iii All design assumptions and related design decisions shall be documented.
   iv The Appendix shall contain:
      (1) Drainage basin maps
      (2) Hydrology/hydraulic worksheets
      (3) Drainage construction plan sheets.
      (4) CDOT pipe material selection documentation
      (5) Water Quality report and PWQ worksheets
      (6) Perform internal QA/QC prior to submission to the Town.

6. Floodplain Assessment
   a. Portions of the south loop ramp landing area, frontage road, and parking lot are located within the Colorado River Floodplain Zone A. However, the proposed pedestrian bridge does not cross a stream, river, or other waterway. Improvements within Zone A may require a floodplain development permit, unless the Town of Silt waives this requirement for itself.
   b. Identify location of regulatory floodplains and floodways published by FEMA and local agencies, and assess impacts of planned changes to those boundaries from CDOT activities or planned map revisions by others.
   c. Add information to environmental resource mapping of existing conditions
   d. Determine the adverse impacts of each alternative with respect to the base flood elevation (BFE), floodway boundary, and local drainage. This must include the impacts of construction and other "temporary" activities.

e. Analyze impacts and develop possible actions to mitigate for the adverse impacts, then coordinate with roadway and structural designers.
f. Analyze the impacts and mitigation. Included in the analysis will be a determination of significant impacts due to:
    i Single community access routes.
    ii Risk for social or economic losses due to flooding
    iii Alteration of beneficial floodplain values.
    iv Recommend preparation of a local floodplain development permit for all work in floodplains and floodways, as required by state and federal law.
    v Show all ground survey point elevations in the same vertical datum identified on the current effective FIRM.
    vi Add notes to indicate the waterway name, jurisdiction and community number, panel number, date of current effective information, a sentence describing which local code requires permits, a sentence for permitting and no rise compliance, and a note recognizing that flooding may occur outside the mapped Special Flood Hazard Area (SFHA).
    vii Determine scour for design storm, the 500-year event, incipient overtopping condition, and maximum scour-inducing storm (if applicable).
g. Prepare a Floodplain Information Sheet for the final approved plan set.
    i Show and clearly label the current effective 100-yr floodplain and floodway boundaries, and the 500-year floodplain (as applicable).
    ii Show the limits of disturbance for all permanent and temporary activities, and label as such.
    iii Show all ground survey point elevations in the same vertical datum identified on the current effective FIRM.
    iv Add notes to indicate the waterway name, jurisdiction and community number, panel number, date of current effective information, a sentence describing which local code requires permits, a sentence for permitting and no rise compliance, and a note recognizing that flooding may occur outside the SFHA.
    v Add all conditions of approval from the local agency to the notes, especially for as-built survey and P.L.S. & P.E. re-certification requirements.
    vi Add a note identifying any 625 Survey specials.
h. Prepare a Preliminary Floodplain Technical Memorandum describing conclusions with supporting FEMA documentation. Acceptance from the Town of Silt and CDOT will be required.
i. Supplemental scope of work for floodplain analysis includes:
    i Surface Creation
        (1) Collect and combine multiple terrain datasets using to create an accurate surface model.
        (2) Verify datasets are compatible and accurately georeferenced.
        (3) Merge datasets to remove any inconsistencies or overlaps, and generate a seamless surface representation.
    ii Order FEMA Model

(1) Obtain the latest FEMA flood models for the project area.
(2) Verify the data is the most recent and relevant release for modeling purposes.
(3) Secure any necessary permissions or licenses required for model use.

iii Updated Effective Model with Survey
(1) Integrate recent survey data into the FEMA model to enhance its accuracy.
(2) Adjust the model parameters based on the ground truth data from the surveys.
(3) Validate the updated model against known flood events and adjust, as necessary.

iv Build A-Zone Model
(1) Develop a hydraulic model for A-Zone areas, typically those subject to a 1% annual chance of flood.
(2) Use the surface model and survey data to simulate flood conditions in A-Zones.
(3) Calibrate the A-Zone model to reflect observed flooding conditions and provide compliance with regulatory standards.

v Troubleshooting
(1) Identify and resolve any issues that arise during the modeling process.
(2) Document the troubleshooting process and solutions for future reference.

vi Mitigation Design (e.g., Ditch Regrading)
(1) Design flood mitigation solutions such as ditch regrading to improve drainage and reduce flood risk.
(2) Model the impact of mitigation designs on flood behavior.
(3) Prepare detailed design parameters for implementation.

vii Model Design (Initial)
(1) Set up initial hydraulic and hydrologic models based on available data.
(2) Determine model boundaries, parameters, and initial conditions.
(3) Conduct preliminary runs to assess model performance.

viii Scour Analysis
(1) Analyze the potential for scour at critical infrastructure points such as bridges and culverts.
(2) Use the hydraulic model to predict areas of high velocity and turbulence that can cause scour.
(3) Develop recommendations to mitigate potential scour issues.

ix Report & Final
(1) Compile all findings, analyses, and recommendations into a comprehensive report.
(2) Provide the report is clear, well-organized, and meets all project and regulatory requirements.
(3) Finalize the report after internal reviews and revisions.

x Permit Exhibits
(1) Create detailed maps and exhibits for permit applications.

(2) Provide exhibits clearly communicate the project scope, impact, and mitigation measures.
(3) Coordinate with permitting agencies to provide exhibits that meet their requirements.

xi QC (Quality Control)
(1) Develop and implement a comprehensive Quality Control (QC) plan tailored to the project's specific requirements. This plan will outline the QC procedures, responsible personnel, and timelines for each phase of the project.
(2) Conduct regular QC checks at predetermined milestones throughout the project lifecycle. These checks will include, but not be limited to, data accuracy, model calibration, analytical processes, and final document review.
(3) Utilize a peer-review system for critical components such as model design and mitigation strategies, where separate qualified personnel who were not involved in the original work will review and verify the results.
(4) Maintain a QC log to record all checks performed, issues identified, and corrective actions taken. This log will be used to track the resolution of any problems and to provide a record of quality assurance practices for the project.
(5) Review all deliverables including GIS layers, model outputs, design plans, and report text for adherence to the project's technical specifications, accuracy, and completeness. Any deviations from the expected standards must be corrected before the next project phase or deliverable submission.

xii State Review
(1) Submit the final report and all associated modeling and design work to the state for review.
(2) Respond to any comments or questions from the state review process.
(3) Make any necessary revisions based on state feedback to secure approval. One iteration included in hours.

7. Environmental Compliance
   a. Water Quality
      i Storm Water Management Plan
      Initiate a Storm Water Management Plan in accordance with:
      (1) Municipal Separate Storm Sewer Systems (MS4)
      (2) CDPHE's Construction Discharge Permit System requirements
      (3) CDOT's Erosion Control and Storm Water Quality Guide
      (4) Local agency SWMP/Erosion Control requirements
      (5) CDOT's Standard Specifications
      (6) CDOT Standard Plans
      (7) Other appropriate documents
   b. NEPA Environmental Clearances
      i Coordinate and facilitate an Environmental Scoping Meeting with CDOT.

ii Resource constraints shall be coordinated with the preliminary design. Clearance documentation will be completed during final design.
iii Biological Resources – Prepare a biological resource report that includes threatened and endangered species, migratory birds, bald and golden eagles, noxious weeds, and habitat impacts.
iv Hazardous Materials – Generate an ERIS radius report, perform an initial site assessment, fill out Form 881, and prepare a report of hazardous material findings.
v Cultural Resource Clearances – Centennial Archeology will be performing a Class III historic and archeological clearance for the project to comply with Section 106 and Historic 4(f). SHPO consultation will be required.
vi Other Resources – Provide a memo covering all non-impacted resources will be provided if requested by CDOT.

8. Utility Coordination
    a. It is estimated that Subsurface Utility Engineering (SUE) will be completed to a Quality Level B.
    b. Location Maps. Obtain utility location maps from the utility companies which identify utility features in the project area.
    c. Reviews and Investigations. Conduct field reviews and utility investigations with the Town of Silt and utility companies, as required, to ensure correct horizontal and vertical utility data. When possible, this will be done utilizing non-destructive investigative techniques. The horizontal and vertical locations will be shown in the FIR plans and cross sections. When test holes are required, the Consultant shall be responsible for all necessary excavations.
    d. 20 test holes are estimated. All test holes are on CDOT right-of-way or Town of Silt right-of-way.
    e. Incorporate utility locations in plans from utility survey.
    f. Relocation Recommendations. Submit necessary information for the relocation or adjustments of affected utilities to the Town of Silt for review. The consultant will develop and coordinate the required utility agreements in coordination with the Town.

9. Roadway Design, Trail Design, and Roadside Development
    a. Coordinate all design activities with the Town of Silt staff and outside entities.
    b. Roadway and Trail Design
        i Input, check, and plot survey data
        ii Verify that a project specific coordinate system approved by Town of Silt and CDOT is used to identify the horizontal locations of key points. The coordinate systems used for roadway design, trail design, and ROW shall be compatible.
        iii Input and check horizontal and vertical alignments against all design criteria. Necessary variances and/or design decisions will be identified with justification and concurrence by CDOT, FHWA and the Town.
        iv Provide alignments, toes of slope and pertinent design features, including permanent and temporary impacts, to the Town.

v Plot/develop all required information on the plans in accordance with all applicable CDOT and Town of Silt policies and procedures.
vi Using current approved software, generate a 3-dimensional design model and produce preliminary quantities
vii Review design for compatibility with future interchange alternatives. Design shall not preclude interchange alternatives.

c. Roadside Development
For roadside items including but not limited to, guardrails, delineators, ditches, PWQ CMs, landscaping, sprinkler systems, pedestrian/bike trails, sidewalks, lighting, curb ramps, and parking lot design and provide layouts in the plans.

i Critical locations in the plans for irrigation sleeves and other utility conduits underneath the proposed roadways.
ii Coordinate the roadside items with the Storm Water Management Plan (SWMP).

10. Right-of-Way
The following work shall be done by, or under the immediate supervision of, a Professional Land Surveyor (PLS).

a. Research
i Identify affected ownership from preliminary design plans
ii Obtain assessor's maps for the project
iii Locate documents which transfer title
iv Prepare chain of title as described in the manual or as directed by the Town of Silt
v Look for encumbrances, liens, releases, etc.
vi Make physical inspection of property. Note any physical evidence of apparent easements, wells, ditches, ingress, and egress.
vii Check with local entities such as the CDOT, the Town, County Road Department or County Engineer for location of existing roads or easements.
viii Check for and obtain latest subdivision plats and vacations of streets.

b. Ownership Map
Project coordinate system ownership map shall be submitted along with a "Project Narrative".
i Review preliminary design and survey information.
ii Review project coordinate system and basis of bearing from Control Survey prior to calculations.
iii Compute alignment of ROW centerline and store coordinates of all found monuments within the first tier of properties left and right of Centerline.
iv Review ownership documents (Memoranda of Ownership and/or title commitments, deeds and supporting plats).
v Determine existing Right-of-Way limits from deeds of record, CDOT plans and found ROW markers. Previous Right-of-Way plans, if available, will be provided by CDOT as an aid.
vi Determine ownerships and their property boundary locations. Locate the intersection of these property boundary lines with the existing CDOT Right-of-Way. Determine location and ownership of existing easements of record.

vii Secure additional property ties and additional topography where the highway improvement may affect improvements adjacent to the Right-of-Way. This additional topography should include:

(1) Proximate buildings, sheds, etc.
(2) Underground cables and conduits
(3) Wells
(4) Irrigation ditches and systems
(5) Septic tanks, cesspools, and leaching fields
(6) Landscaping
(7) Other
(8) Reconcile overlaps and gaps in ownerships as required by the Town, documenting method used (may require additional field work). Resolve the differences between UPRR right-of-way versus property lines on GIS web site. Include reasons for decisions in the "Project Narrative".
(9) Plot OWNERSHIP MAP. Metric equivalents may be required.
(10) Label all monuments found with description of monument and project coordinates (from Control Survey Diagram)
(11) Show improvements and topography within the ownerships and existing access to the street/county road system.
(12) Number ownerships alternately as they occur along the centerline from south to north or west to east in the same direction as the stationing. Show current names of owners and lessees.
(13) Calculate the total area of all ownerships affected, including coordinates of all property corners. Deduct areas for existing road Rights-of-Way. Bearings and distances do not need to be shown on 1" = 1 mile abbreviated OWNERSHIP MAPS. Show the total area of the proposed aerial easement across Union Pacific Railroad right-of-way.
(14) Different land uses within a property should be cross-hatched or shaded.
(15) In the lower right corner of the OWNERSHIP MAP, show seal, number and name of Professional Land Surveyor supervising the work.
(16) Transmit finished reproducible OWNERSHIP MAP, electronic drawing files, and Memoranda of Ownership to the Town of Silt along with all calculations, field notes, and supporting data. The OWNERSHIP MAP will include a copy of the control and monumentation sheet.

11. Major Structural Design

Major structures are bridges and culverts with a total length greater than twenty feet or retaining walls with a total length greater than one hundred feet and a maximum exposed height at any section of over five feet. This length is measured along centerline of roadway for bridges and culverts, and along the top of wall for retaining walls. Overhead sign structures (sign bridges, cantilevers, and butterflies extending over traffic) are also major

structures, but are exempt from the structure preliminary design activity defined here. The CDOT Structure Reviewer will participate in coordinating this activity.

a. Structural Data Collection
   i Obtain the structure site data. The following data, as applicable, shall be collected: (Typical roadway section, typical ped/bike trail section, roadway plan and profile sheets and ped/bike plan and profile sheets showing all alignment data, topography, utilities, preliminary design plan) Right-of-Way restrictions, preliminary hydraulics and geology information, environmental constraints, lighting requirements, guardrail types, recommendations for structure type, and architectural recommendations.

b. Structure Selection and Layout
   i) Review the structure site data to determine the requirements that will control the structure size, layout, type, and alignment alternatives. On a continuing basis, provide support data and recommendations as necessary to finalize the structure site data.
   ii) Determine the structure layout alternatives. For bridges, determine the structure length, width, and span configurations that satisfy all horizontal and vertical clearance criteria. For walls, determine the necessary top and bottom of wall profiles.
   iii) Determine the structure type alternatives. For bridges, consider precast and cast-in-place concrete and steel superstructures and determine the spans and depths for each. For walls, determine the feasible wall types.
   iv) Determine the foundation alternatives. Consider piles, drilled shafts, spread footings, and mechanically stabilized earth foundations based on geology information from existing structures and early estimates from the project geologist. To obtain supporting information, initiate the foundation investigation as early as possible during the preliminary design phase.
   v) Develop the staged construction phasing plan, as necessary for traffic control and detours, in conjunction with the parties performing the roadway design and traffic control plan. The impact of staged construction on the structure alternatives shall be considered and reported on.
   vi) Compute preliminary quantities and preliminary cost estimates as necessary to evaluate and compare the structure layout, type, and rehabilitation alternatives.
   vii) Evaluate the structure alternatives. Establish the criteria for evaluating and comparing the structure alternatives that, in addition to cost, encompass all aspects of the project's objectives. Based on these criteria, select the optimum structure layout, type, and rehabilitation alternative, as applicable, for recommendation to the Town of Silt.
   viii) Prepare preliminary general layout for the recommended structure. Prepare structure layouts in accordance with current standards. Special detail drawings and a detailed preliminary cost estimate shall accompany the general layout. The special detail drawings shall include the architectural treatment. Perform an independent detail check of the general layout.

c. Structure Selection Report
   Prepare a structure selection report to document, and obtain approval for, the

structure preliminary design. By means of the structure general layout, with supporting drawings, tables, and discussion, provide for the following:

i) Summarize the structure site data used to select and layout the structures. Include the following:
   (1) Project site plan
   (2) Ped/bike vertical and horizontal alignments and cross sections at the structure
   (3) Vertical and horizontal clearances to roadways and railroads below the structure
   (4) Utilities on, below, and adjacent to the structure
   (5) Deck drainage
   (6) Preliminary geology information for structure foundation
   (7) Architectural requirements

ii) Report on the structure selection and layout process. Include the following:
   (1) Discuss the structure layout, type, and alignment alternatives considered
   (2) Define the criteria used to evaluate the structure alternatives and how the recommended structure was selected
   (3) Provide a detailed preliminary cost estimate and general layout of the recommended structure

iii) Obtain acceptance by the Town, CDOT and FHWA on the recommended structure and its layout. Allow approximately two weeks for review of the structure selection report. Transmit the structure layout and structure selection report to the railroad and allocate 2 months for railroad response. The associated general layout, with the revisions required by the Town, CDOT review, will be included in the FIR plans. The structure selection report, with the associated general layout, must be accepted in writing by the Town and CDOT prior to the commencement of further design activities.

d. Foundation Investigation Request
Initiate the foundation investigation as early in the preliminary design phase as is practical. On plan sheets showing the project control line, its stations and coordinates, utilities, identify the test holes needed and submit them to the project geologist. The available general layout information for the new structure shall be included in the investigation request.

12. Landscape Architecture
   a. Coordinate all design activities with the preliminary design and Town of Silt.
   b. Develop landscape design including:
      i) Landscape and site design
      ii) Irrigation design
      iii) Specialty and standard hardscape improvements
      iv) Site furnishings and amenities
      v) Site lighting and coordinate with lighting design staff
      vi) Retaining wall aesthetics
      vii) Bridge aesthetics
      viii) Wayfinding signage

c. Areas to include:
    i) North side of I-70: bridge ramp/plaza, park/amenity space, pedestrian connections along 7th Street to US 6. Corner treatment to match existing corner improvements.
    ii) South side of I-70: relocated parking lot, frontage road realignment, bridge ramp/plaza, potential drop off area, pedestrian connections.
    iii) Ped/bike Bridge: center and secondary pier aesthetics.

13. Lighting
    a. Develop preliminary lighting plan.

14. Waterline and Sanitary Sewer
    a. Develop preliminary water and sanitary relocation requirements on the south side.
    b. Assume 300 feet of relocations each to accommodate the overpass circular ramp on the south side.

15. Construction Phasing Plan
    a. A construction phasing plan shall be developed for all projects which integrates the construction of all the project work elements into a practical and feasible sequence. This plan shall accommodate the existing traffic movements during construction (detours). A preliminary traffic control plan will also be developed which will be compatible with the phasing plan.

16. Preparation for the 30% Design Review (CDOT Field Inspection Review (FIR))
    a. Coordinate, complete, and compile the plan inputs from other Town and CDOT reviews: materials, hydraulics, traffic, right-of-way, environmental and water quality, and Staff Bridge.
    b. If a major structure is included in the project, including a PWQ CM, a general layout (which has been accepted by the Town) will be included in the 30% plans.
    c. Prepare the preliminary cost estimate for the work described in the 30% plans based on estimated quantities.
    d. The 30% plans shall comply with Town and CDOT requirements and shall include a title sheet, typical sections, general notes, plan/profile sheets, and preliminary layouts of interchanges/intersections. The plan/profile sheets will include all existing topography, survey alignments, projected alignments, profile grades, ground line, existing ROW, rough structure notes (preliminary drainage design notes, including pipes, inlets, ditches and channels), and existing utility locations.
        i) The following items are anticipated to be included with the 30% plans:
            (1) Title sheet
            (2) Typical sections
            (3) Preliminary quantities
            (4) Preliminary earthwork
            (5) Proposed Right-of-Way and proposed aerial easement across UPRR
            (6) Soil profile and stabilization data
            (7) Roadway, trail, and parking lot plan and profiles

(8) Drainage plan
(9) Bridge and ramp connection general layouts
(10) SWMP narrative
(11) Construction phasing concept
(12) Key cross sections

e. Six hard copies and one electronic PDF file of submittals shall be delivered.

17. 30% Design Review (FIR)
    a. Prepare for and attend the 30% design review meeting.
    b. The meeting minutes shall be prepared by the Consultant PM, approved by the Town of Silt PM, and distributed as directed.
    c. Design decisions concerning questions raised by the review will be resolved in cooperation with the Town and Consultant PM. The Consultant PM shall document the decision and transmit the documentation to the Town of Silt for approval.
    d. A list of all deviations from standard design criteria along with the written justification for each one shall be submitted to the Town of Silt.

SECTION 7
SCOPE OF SERVICES FOR FINAL ENGINEERING
(Final Design – 90% and Construction Documents – 100%)

1. Traffic Engineering
    a. Prepare and provide permanent signing/pavement marking plans.
    b. Finalize pedestrian crossing design at US 6/Main St and 7th Street.
    c. Prepare and provide the construction traffic control plans and quantities.

2. Materials Engineering
    a. Finalize and provide the stabilization plan/pavement design report.
    b. Finalize geotechnical considerations and incorporate them into the plans.

3. Environmental Permits
   This activity is concurrent with final design and must be completed prior to the advertisement for construction. Coordinate between the agencies, the CDOT Environmental Manager and the Town of Silt PM and prepare and submit application and design information to the CDOT Environmental Manager for the following permits:
    a. 401 Permit Process (Water Quality Certification)
    b. 402 Permit Process (Point Source Discharge)
    c. 404 Permit Process (Discharge of Fill)
        i) Determine impacts
        ii) Coordinate with the U.S. Army Corps of Engineers, Region and Staff Design
        iii) Incorporate permit stipulations into the final plans
    d. Senate Bill 40 Certification
    e. CDPS or NPDES Storm Water Permit for Construction Activities

4. Foundations for Structures
   Ensure approval of the Foundation Investigation Report from CDOT and Town of Silt.

5. Hydrology, Hydraulics and Floodplain Management
    a. Data Review. Review data and information developed under the Preliminary Hydraulics Report, Preliminary Drainage Report, and/or Preliminary Floodplain Technical Memorandum, and update both/all in accordance with decisions made since the 30% design.
    b. Hydrology and Hydraulics
        i) Review data and information developed under the preliminary hydraulic investigation and update per 30% design decisions.
        ii) Complete final design for minor drainage structures
            (1) Finalize horizontal and vertical locations and sizes for all drainage structures based on hydraulic design. Update locations in construction plans by highway station or coordinates, as appropriate.
            (2) Make final recommendations for pipe material based on CDOT Pipe Material Selection Policy guidelines. Document recommendations in a letter with supporting design information.

(3) Finalize structure cross-sections and profiles to determine the elevations, flow lines, slopes and lengths of structures.
(4) Finalize deck/structure drainage in coordination with the Town, CDOT Staff Bridge or their designee.

iii) Complete final design for all drainage details required for minor and major drainage structures.
iv) Recommend culvert pipe sizes, type, shape and material for proposed construction detours.
v) Erosion and sedimentation problems identified with solutions in place, including but not limited to erosion and scour countermeasure designs, analyses and reports.

c. Prepare final construction plans in accordance with requirements in the CDOT Drainage Design Manual (DDM).
i) Drainage Notes
ii) Drainage Tabulation Sheets
iii) Drainage Plan Sheets
iv) Drainage Profile Sheets
v) Drainage Detail Sheets
vi) Floodplain Information Sheet

d. Prepare a Final Drainage Report in accordance with the requirements of the CDOT DDM
i) Review data and information in the Preliminary Drainage Report and update in accordance with decisions made at 30% design
ii) Finalize all sections of the report. All design assumptions and related design decisions shall be documented in the report.
iii) Provide a PDF copy of the Final Drainage Report to the CDOT Project Manager for disbursement to appropriate parties.
iv) Floodplain information incorporated into the plan sheets
v) Provide digital linework from all drainage and floodplain analysis in GIS Shapefiles, and CAD drawings.

e. Prepare Final Floodplain Technical Memorandum
i) Finalize preliminary Floodplain Technical Memorandum based on comments and design development.
ii) Provide a copy of approved floodplain development permits and no rise certifications.
iii) Identify all construction and as-built stipulations required from approved permits and certifications.
iv) Identify future actions required prior to CDOT LA project close-out, especially as-built survey and P.L.S. certification, and final P.E. re-certification with local agencies.
v) All floodplain related tasks will utilize existing FEMA floodplain mapping.

6. Environmental Compliance
a. Water Quality

i) Storm Water Management Plan. Finalize Storm Water Management Plan developed during preliminary design in coordination with design development.

b. NEPA Environmental Clearances
   i) Coordinate and facilitate environmental clearances with CDOT.
   ii) Complete resource documentation begun during preliminary design.

7. Utility Coordination
   Following the finalization of the roadway horizontal alignment and profile grade and the horizontal and vertical location of drainage structures, sewers, and other underground structures, identify and resolve any conflicts to finalize utility clearances.
   a. Prepare and provide final utility plans
      i) The final utility plans shall be prepared following the resolution of the 30% design comments, the completion of the final hydraulic design, and the completion of the design of the other items in the list in paragraph (b) below.
      ii) The final utility plans shall include all horizontal and vertical locations of the existing and proposed utilities and any other details which would indicate possible utility conflicts.
      iii) The new or revised utility locations will be added to the plan topography. Conflicts will be resolved and appropriate pay items and specifications added, if required, to adjust utilities.
      iv) Provide all utility mapping to the Town Engineer in AutoCAD DWG format.
   b. Final railroad plans
      Coordinate the following activities through the Region Utility Engineer and in accordance with railroad requirements.
      i) Develop the railroad encroachment plan (with cross sections) in association with the proposed aerial easement across the railroad.
      ii) Define construction responsibilities between the railroad and highway.
      iii) Develop cost estimates based upon cost allocation previously determined.
      iv) Prepare Public Utilities Commission application exhibits as required.

8. Roadway Design, Pedestrian/Bike Trail Design, and Roadside Development
   a. Roadway design and Pedestrian/Bike Trail Design. Prepare and provide final roadway and trail design plans incorporating all input from applicable Town, CDOT specialties and outside entities.
   b. Roadside design.
   c. Prepare and provide plans for parking lots, sidewalks, curb ramps, retaining walls, sprinkler systems, guardrails, cattle guards, and others, as appropriate.

9. Right-of-Way Plans and Activities
   Reference the CDOT ROW and surveying manual' requirements for the following:
   a. Initiate ROW authorization process
      Coordinate with the Town to initiate the ROW authorization process. Typically, the corrected 30% design plans (with final hydraulic design inputs) will be used

as the design basis for the ROW authorization plans. Two full parcel acquisitions are anticipated on the north side. One easement is anticipated on the south side.

b. Ownership Maps

c. Authorization Plan:
   i) Integrate toes of slopes and other design details such as lane lines, culverts, road approaches, etc. into ownership map (base map for ROW plans).
   ii) Determine new Right-of-Way requirements, access control, and easements (including proposed aerial easement across the railroad) from design plans following the 30% design and plot on ownership/base maps. Normal scale, 1 inch=50 feet in urban areas, 1 inch=100 feet in rural areas. Revise numbering of ownerships to correspond to ROW acquisitions.
   iii) Calculate areas of parcels, easements, and remainders.
   iv) Prepare ROW plan sheets.
   v) Prepare legal descriptions of parcels, easements and access control.
   vi) Prepare tabulation of properties sheet.
   vii) Prepare Right-of-Way Title Sheet.
   viii) Incorporate the Control Survey and Monumentation Sheets into the plans.
   ix) On the Monumentation Sheet, list the ROW, Easement, Control, etc., points to be set and the aliquot corners to be reset.
   x) Prepare ROW tabulation of road approaches, if applicable. Show owner milepost/station, right or left of centerline, width of approach, skew angle, and any remark.
   xi) Hold ROW Plan Review (ROWPR), with Design, ROW, and Construction to determine if ROW plans are sufficient to proceed with appraisal of property to be acquired for the project.
   xii) Transmit originals of the plan sheets, title sheet, tabulation of properties sheet, and revised ownership (memoranda of ownership and title commitments as directed by the ROW manager), calculations and supporting data (i.e., parcel diaries), and final electronic data for all work products.

d. Right-of-Way Plan Revisions
   Revise the ROW plans as needed throughout the appraisal and negotiation process for those changes approved by the Town of Silt. All plan revisions shall be submitted within 5 working days after receiving notice from Town to proceed with a Plan Revision.

10. Final Major Structural Design
    During the conduct of this activity, the Consultant shall participate in structural review meetings with the Town/CDOT Structural Reviewer.
    a. Structure final design
       i) Perform the structural analysis. Provide superstructure design, substructure design and document the design with design notes, detail notes, and computer outputs.
       ii) Perform final design check from design and detail notes.
    b. Preparation of structure plans and specifications.

i) Prepare and provide the Structural Plans and Specifications, including any revisions identified during the independent check.

c. Independent design, detail and quantity check

d. Prepare and provide the bridge rating and field packages. A load rating is not required for pedestrian/bike structures that do not carry highway vehicles.

11. Landscape Architecture
    a. Landscaping
        i) Determine the most economical alternative, finalize concepts for all areas, and complete the plan.
        ii) Verify that an acceptable safe recovery distance exists between traveled way and all trees to be planted.
        iii) Coordinate special permits that may be required.
        iv) Verify availability of plant materials and submit letter to the CDOT/PM certifying that designated plants are available.

12. Lighting
    a. Lighting plans
        i) After approval of the locations of the lights, the lighting design will be completed with the following information shown on the plan sheets:
            (1) Circuit type and voltage of power source
            (2) Location of power source (coordinated with the utility engineer)
            (3) Luminaire type and lumens
            (4) Light standard type and mounting height
            (5) Bracket arm type and length
            (6) Foundation details
            (7) Size and location of electrical conduit
            (8) Locations of power sources(s)/lighting control center(s) (if appropriate)
            (9) Location of direct burial cable
            (10) Size of wiring and/or direct burial cable
        ii) Coordinate with local entities
    b. Assume existing circuits and transformers can provide ample voltage and current without the need to size new or additional transformers and primary power conductors. Connection points are assumed to be within immediate vicinity of the project.

13. Waterline and Sanitary Sewer
    a. Finalize waterline and sanitary sewer design developed during preliminary design.
    b. Prepare plans, profiles, and details per owner requirements.

14. Construction Phasing Plan
    A final construction phasing plan will be developed which integrates the construction of all project work elements into a practical and feasible sequence. This plan shall accommodate

the existing traffic movements during construction, and a final traffic control plan will be developed which shall be compatible with the phasing plan.

15. Preparation for the 90% Design Review (CDOT Final Office Review (FOR))
    a. Coordinate the packaging of the plans.
        i) Collect plans from all design elements and collate the plan package. Include all items listed in the Project Development Manual.
        ii) Calculate plan quantities and prepare the tabulations and Summary of Approximate Quantities.
    b. In addition to the plan sheets, special provisions shall be provided. This will consist of those unique Project Special Provisions which have to be written specifically for items, details and procedures not adequately covered by CDOT's Standard Specifications and Standard Special Provisions. Also a list of the Standard Special Provisions which are applicable to the project shall be prepared. The Project Special Provisions shall be provided in the CDOT format and submitted with the project plans. Appropriate mitigation commitments made within any environmental documents should be included in the plans and specifications.
    c. Prepare 90% Design Estimate.
    Item numbers, descriptions, units and quantities shall be listed and submitted to the Town of Silt.
    d. Submit the 90% Design Plans and Special Provisions to the Town of Silt for a preliminary review prior to the CDOT FOR. Six hard copies and one electronic PDF file shall be delivered.
    e. FOR plan reproduction not to exceed two hard copy sets of sets. Electronic documents will be submitted.

16. 90% Design Review (FOR)
    a. Attend the 90% Design Review Meeting
    b. The meeting minutes shall be prepared, approved, and distributed within two weeks of the meeting as directed.
    c. The 90% plan sheets and the specifications shall be revised in accordance with the meeting comments and submitted to the Town of Silt within four (4) weeks after the review meeting. Provide comment responses to Town and CDOT comments.
    d. Submit the final revision of the plans after Town review.

17. 100% Construction Documents
    a. The bid plan construction documents contract package shall consist of the revised 90% design and will completely describe the work required to build the project including project special provisions and detailed quantities.
    b. Environmental, utility, and right of way clearances shall be completed with the 100% construction documents.
    c. Plans shall be delivered to the Town Engineer in AutoCAD DWG or DXF format

SECTION 8-11
ADDITIONAL SECTION FOR FUTURE SCOPE OF SERVICES

Section 8-11 are reserved for future scope of services.

- **Pedestrian/Bike Overpass Bidding Support, and Post Design Services**
- **Interchange FIR (30% design)**
- **Interchange FOR (90% design)**
- **Interchange Construction Plan Package (100% design)**

EXHIBIT B

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
ENGINEERING DESIGN SERVICES
FEE ESTIMATE
2/9/2024

No.	Tasks Description	Estimated Subtotal Task Hours	Estimated Total Task Hours	Subtotal Task Cost	Total Task Cost
1	Project Management and Coordination		712		$ 153,184.81
	Project Management	335		$ 83,666.04	
	UPRR Coordination	144		$ 27,705.11	
	Public Involvement	185		$ 34,852.82	
	Grant Funding Support	48		$ 6,960.84	
2	Preliminary Engineering (30%)		2,928		$ 510,148.39
	Survey	120		$ 26,582.45	
	Traffic Engineering	100		$ 15,386.32	
	Materials Engineering and Pavement Design	604		$ 140,921.69	
	Hydrology/Hydraulic Engineering	100		$ 15,044.00	
	Floodplain Assessment	110		$ 17,186.54	
	Environmental Compliance	129		$ 17,222.46	
	Utility Coordination and Plans	140		$ 51,610.67	
	Roadway, Parking Lot, Sidewalk Design	827		$ 119,048.16	
	Right of Way Ownership	80		$ 9,980.28	
	Structural Design	314		$ 34,891.68	
	Landscape Architecture	200		$ 33,530.00	
	Lighting	68		$ 9,569.12	
	Waterline and Sanitary Sewer	136		$ 19,175.02	
3	Final Engineering (90% and 100%)		3,030		$ 419,962.39
	Traffic Engineering	143		$ 21,665.82	
	Materials Engineering and Pavement Design	42		$ 7,135.56	
	Hydrology/Hydraulic Engineering	104		$ 14,969.76	
	Floodplain Management	82		$ 13,065.96	
	Environmental Compliance	32		$ 4,732.08	
	Utility Coordination and Plans	67		$ 9,403.87	
	Roadway, Parking Lot, Sidewalk Design	1,158		$ 164,811.45	
	Right of Way Plans and Documents	136		$ 17,175.70	
	Structural Design	750		$ 89,328.10	
	Landscape Architecture	280		$ 46,244.00	
	Lighting	108		$ 14,124.91	
	Waterline and Sanitary Sewer	128		$ 17,305.18	
	Overall Total Estimated Task Hours:		6,670		
	Overall Total Task Design Project Amount:				$ 1,083,295.59

RockSol
Consulting Group, Inc.

RockSol's Schedule of Hourly Rates
January 1, 2024 to December 31, 2024

RockSol Standard Fee Schedule

Employee Classification/Years of Experience	*Hourly Rate**
Senior Project Manager	$274.29
Senior Transportation Engineer	$232.35
Senior Project Engineer	$210.41
Senior Structural Engineer	$260.89
Structural Engineer II	$170.45
Structural Engineer I	$147.48
Senior Geotechnical Engineer	$257.07
Senior Geologist	$163.65
Staff Engineer II	$165.18
Staff Engineer I	$147.48
Engineer-in-Training III	$137.09
Engineer-in-Training II	$116.77
Engineer-in-Training I	$104.62
Engineering Student Intern	$68.05
Environmental Manager	$168.12
Environmental Specialist II	$125.54
Environmental Specialist I	$105.52
Const. Mgr/Inspector IV (20-25 yrs or PE 15 yrs)	$179.27
Const. Mgr/Inspector III (10-20 yrs or PE 7 yrs)	$157.74
Const. Mgr/Inspector II (3 to 10 yrs)	$125.44
Const. Mgr/Inspector I (Less than 3 yrs)	$93.26
Technician IV (Lab or Field Manager)	$138.96
Technician III (+15 years)	$114.52
Technician II (2 to 15 years)	$94.63
Technician I (Less than 2 yrs)	$78.68
Design Technician III	$137.09
Design Technician II	$106.14
Design Technician I	$80.84
Graphic Designer	$115.32
Project Control and Admin	$105.61

Note: rates are subject to escalation for subsequent calendar years

- Mileage — Federal Government Rate
- Travel — At Cost
- Drilling — At Cost
- Outside Services — At Cost
- Public Involvement Supplies/Mailings — At Cost

2024 KLJ Rate Sheet

KLJ Staff Type	Standard Rate	KLJ Staff Type	Standard Rate
Archaeologist I	$76	Paleontologist	$156
Archaeologist II	$114	Associate Planner	$108
Archaeologist III	$132	Planner	$144
Archaeologist IV	$185	Senior Planner	$185
Archaeologist V	$225	Project Assistant III	$107
Designer Technician	$114	Project Assistant I	$77
Associate Designer	$156	Project Assistant II	$89
Designer	$172	Project Controls Specialist I	$123
Senior Designer	$207	Project Controls Specialist II	$154
EIT I	$112	Public Engagement Strategist	$137
EIT II	$138	Senior Public Engagement Strategist	$152
Associate Engineer	$162	ROW Associate	$108
Engineer	$183	ROW Agent	$140
Senior Engineer	$235	Survey Technician	$96
Principal Engineer	$293	Crew Chief	$127
Engineering Technician I	$90	Senior Crew Chief	$170
Engineering Technician II	$108	Land Surveyor in Training	$101
Engineering Technician III	$142	Professional Land Surveyor	$182
Engineering Technician IV	$155	Principal Land Surveyor	$211
Environmental Specialist I	$95	CAD Technician I	$92
Environmental Specialist II	$116	CAD Technician II	$110
Environmental Specialist III	$134	CAD Technician III	$123
Environmental Specialist IV	$177	CAD Technician IV	$147
Environmental Specialist V	$195	1 Person Survey Crew	$185
Environmental Specialist VI	$206	2 Person Survey Crew	$240
GIS Specialist I	$84	Project Manager	$215
GIS Specialist II	$121	Sr. Project Manager	$240
GIS Specialist III	$125	Environmental - Project Manager	$190
GIS Specialist IV	$141	Environmental - Sr. Project Manager	$220
Government Relations Specialist I	$119	Survey - Project Manager	$205
Government Relations Specialist II	$130	Survey - Sr. Project Manager	$230
Government Relations Specialist III	$149		
Graphic Design Specialist	$130		
Intern	$82		
Landscape Architect	$140		
Time and Half for Overtime		Included in Hourly Rate	

Reimbursable Expenses (if applicable)		
ATV, UTV, Snowmobile	Included in Hourly Rate	
Survey Equipment	Included in Hourly Rate	
CAD and GIS Work Station	Included in Hourly Rate	
Postage and Routing Printing Cost	Included in Hourly Rate	
Mileage	Included in Hourly Rate	
Special Equipment/Software	Per Project Basis	
Subsistence (Per Diem) - Lodging	$45 / Day per Person	
Subsistence (Per Diem) - Meals	Actual Cost	
Misc. Project Related Expenses	Cost plus 15%	
Sub-Contracts	Cost plus 15%	

**Rates to be renegotiated after January 1st of each calendar year.

20231116_Rate_Sheet

KLJ

britina

p 303.456.2887
1760 Gaylord Street, Ste. 3M
Denver, CO 80206
britina.com

February 9, 2024

Matt Wessell, P.E.
Senior Transportation Manager
RockSol Consulting Group, Inc.
12076 Grant Street
Thornton, CO 80241

Re: I-70 Interchange and Pedestrian / Bike Overpass
Engineering Design Services
Britina Hourly Rate Schedule # RS 2101-02

Dear Matt,

The following is our 2024 hourly rates schedule as requested.

- Britina Design Group
  - Principal $200.00/hour
  - Project Manager $130.00/hour
  - Landscape Designer $110.00/hour

- Irrigation Consultant
  - Project Manager $100.00/hour

I would be pleased to answer any questions or let me know if you need any further information.

Sincerely,

Robert M. Couri, PLA ASLA
President / Principal Landscape Architect

CANYON
ENGINEERING GROUP

2024 HOURLY RATES

STANDARD FEE SCHEDULE: 1/1/2024 – 12/31/2024

Labor Costs:

- Bridge Principal.....$145
- Bridge Lead / Project Manager.....$145
- Assistant Bridge Engineer.....$120
- Administration.....$80

Other Direct Costs:

- Mileage.....Federal Government Rate
- Travel.....At Cost
- Outside Services.....At Cost
- Mailing.....At Cost

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
ENGINEERING DESIGN SERVICES
FEE ESTIMATE
2/9/2024

No.	Tasks Description	Estimated Subtotal Task Hours	Estimated Total Task Hours	Subtotal Task Cost	Total Task Cost
1	Project Management and Coordination		712		$ 153,184.81
	Project Management	335		$ 83,666.04	
	UPRR Coordination	144		$ 27,705.11	
	Public Involvement	185		$ 34,852.82	
	Grant Funding Support	48		$ 6,960.84	
2	Preliminary Engineering (30%)		2,928		$ 510,148.39
	Survey	120		$ 26,582.45	
	Traffic Engineering	100		$ 15,386.32	
	Materials Engineering and Pavement Design	604		$ 140,921.69	
	Hydrology/Hydraulic Engineering	100		$ 15,044.00	
	Floodplain Assessment	110		$ 17,186.54	
	Environmental Compliance	129		$ 17,222.46	
	Utility Coordination and Plans	140		$ 51,610.67	
	Roadway, Parking Lot, Sidewalk Design	827		$ 119,048.16	
	Right of Way Ownership	80		$ 9,980.28	
	Structural Design	314		$ 34,891.68	
	Landscape Architecture	200		$ 33,530.00	
	Lighting	68		$ 9,569.12	
	Waterline and Sanitary Sewer	136		$ 19,175.02	
3	Final Engineering (90% and 100%)		3,030		$ 419,962.39
	Traffic Engineering	143		$ 21,665.82	
	Materials Engineering and Pavement Design	42		$ 7,135.56	
	Hydrology/Hydraulic Engineering	104		$ 14,969.76	
	Floodplain Management	82		$ 13,065.96	
	Environmental Compliance	32		$ 4,732.08	
	Utility Coordination and Plans	67		$ 9,403.87	
	Roadway, Parking Lot, Sidewalk Design	1,158		$ 164,811.45	
	Right of Way Plans and Documents	136		$ 17,175.70	
	Structural Design	750		$ 89,328.10	
	Landscape Architecture	280		$ 46,244.00	
	Lighting	108		$ 14,124.91	
	Waterline and Sanitary Sewer	128		$ 17,305.18	
	Overall Total Estimated Task Hours:		6,670		
	Overall Total Task Design Project Amount:				$ 1,083,295.59

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Senior Project Manager (hours)	Staff Engineer II (hours)	Engineer-in-Training II (hours)	Engineer-in-Training I (hours)	Staff Engineer II (hours)	Environmental Manager (hours)	Senior Geotechnical Engineer (hours)	Staff Engineer I (hours)	Structural Engineer II (hours)	Graphic Designer (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee	Subconsultant [illegible]: Staff hour totals per task	Subconsultant [illegible]: Staff cost totals per task	Total Hours	Total Fee
Billing Rate	$ 174.30	$ 165.15	$ 118.77	$ 104.02	$ 165.15	$ 186.12	$ 257.07	$ 147.40	$ 170.45	$ 115.53	$ 105.61						
Project Management and Coordination	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
A. Project Management and Coordination												0	$ -			0	$ -
Initial Project Meeting	3											3	$ 522.87			3	$ 522.87
Progress Meetings (with Town of Silt) (12 each, up to 3 in-person)												0	$ -			0	$ -
Virtual (10)	6											6	$ 1,045.74			6	$ 1,045.74
In-person (up to 3) (6 hrs each total, includes 4 hrs drive time total)	18											18	$ 4,037.22			18	$ 4,037.22
Internal Project Coordination Meetings (12 each)	6											6	$ 1,045.74			6	$ 1,045.74
Develop Project Schedule and Updates	1	6										7	$ 1,165.17			7	$ 1,165.17
CDOT Coordination	15	15				24			4			58	$ 11,300.73			58	$ 11,300.73
Design Contract Management	9	9									36	54	$ 7,757.19			54	$ 7,757.19
Subconsultant Coordination & Quality Assurance												0	$ -			0	$ -
Arch	1					2						3	$ 546.53			3	$ 546.53
Bridge	3	6										9	$ 1,513.06			9	$ 1,513.06
Canyon	1								2			3	$ 515.19			3	$ 515.19
KLJ	12	6										18	$ 4,302.86	130	$ 41,400.93	148	$ [illegible]
												[illegible]	$ [illegible]	[illegible]	$ [illegible]	[illegible]	$ [illegible]
UPRR Coordination	4	16							60			80	$ [illegible]	64	$ 13,738.07	144	$ [illegible]
B. Public Involvement												0	$ -			0	$ -
Public Involvement Plan	1	3										4	$ 700.02			4	$ 700.02
Website												0	$ -			0	$ -
Public Meeting #1 - In Person												0	$ -			0	$ -
Plan	1	4	16			1			4	16		42	$ 6,400.37			42	$ 6,400.37
Attend	6	6	6						6			24	$ 4,300.34			24	$ 4,300.34
Summary		2	8									10	$ 1,264.02			10	$ 1,264.02
Public Meeting #2 - Virtual												0	$ -			0	$ -
Plan	1	4	16			1				16		38	$ 4,818.37			38	$ 4,818.37
Attend	1	2	2						2			7	$ 1,179.00			7	$ 1,179.00
Summary		2	8									10	$ 1,264.02			10	$ 1,264.02
Stakeholder Meetings (up to 10, 2 in-person)												0	$ -			0	$ -
Virtual (8)	8	4			2	2			4			20	$ 4,365.44			20	$ 4,365.44
In-person (up to 2) (6 hrs each total, includes 4 hrs drive time total)	12	12							6			30	$ 6,250.34			30	$ 6,250.34
												[illegible]	$ [illegible]	-	-	[illegible]	$ [illegible]
												0	$ -			0	$ -
C. Funding and Grant Writing												0	$ -			0	$ -
Funding Support	4	4	4						4			16	$ 2,806.70	32	$ 4,654.08	48	$ [illegible]
Grant Application Development (N/A - by Town of Silt)												0	$ -			0	$ -
												16	$ 2,806.70	32	$ 4,654.08	48	$ [illegible]
Hours Sub-Total for Task defined above	113	101	68	0	2	30	0	0	92	33	36	466		246		712	
Engineering Fee Sub-Total for Task defined above	$ 20,004.77	$ 16,680.10	$ 7,000.30	$ -	$ 330.30	$ 5,040.00	$ -	$ -	$ [illegible]	$ 3,600.34	$ 3,801.06		$ 83,221.71		$ 59,301.10		$ 142,422.81

466 · $ 83,221.71 · 146 · $ 59,301.10 · 712 · $ 142,422.81

[illegible] Labor Cost Subtotal:	466	$ 83,221.71	Sub Labor:	246	$ 59,301.10	Total Labor: 712 · $ 142,422.81

Mileage	161 miles one-way ([illegible] Thornton office to Silt)	276 round trip	11 trips	3036 · $ 0.60	$3,532.00
Public meeting supplies				1 · $ 200.00	$200.00
Mailings				2 · $ 1,500.00	$3,000.00
Printing of mailers				2 · $ 1,000.00	$2,000.00
Miscellaneous				1 · $ 2,000.00	$2,000.00
				0 · $ -	$0.00
				0 · $ -	$0.00
				0 · $ -	$0.00
				0 · $ -	$0.00

[illegible] Other Direct Costs	$ 10,732.00	Sub Directs:	$ -	Total Directs:	$ 10,732.00
[illegible] Total Fee:	$ 93,953.71	Sub Total Fee:	$ 59,301.10	Total Fee:	$ 153,154.81

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	RockSol Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Engineer-in-Training II (hours)	Project Control and Admin (hours)		Subtotal Hours	Subtotal Fee		Subconsultant KLJ: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 218.00	$ 175.00	$ 97.00	$ 87.00										
Survey														
a) Secure Available Data						0	$ -					0	$ -	
b) Secure Additional Property Ties/Topography						0	$ -					0	$ -	
c) Identify or Establish at Least Six (6) Permanent Monuments						0	$ -					0	$ -	
d) Land Survey/Boundary Survey						0	$ -					0	$ -	
e) Identify Property Owners and Obtain Necessary Permission						0	$ -					0	$ -	
f) Gather Topographic and Utility Data						0	$ -					0	$ -	
g) Survey the Required Project Control						0	$ -					0	$ -	
h) Obtain Roadway Cross-sections						0	$ -					0	$ -	
i) Obtain Intersection Configurations and Cross-sections						0	$ -					0	$ -	
j) Map the Existing Contours						0	$ -					0	$ -	
k) Drawings						0	$ -					0	$ -	
l) Coordinate With the Design Engineer						0	$ -					0	$ -	
m) Obtain All Subdivision and Land Survey Plats						0	$ -					0	$ -	
n) Obtain a Title Commitment or Policy on All Adjacent Properties						0	$ -					0	$ -	
o) Provide Copies of All Survey Drawings, Plats, and Legal Descriptions						0	$ -					0	$ -	
p) Furnish Copies to the County						0	$ -					0	$ -	
q) Cover Adequate Areas and Obtain Necessary Information						0	$ -		120	$ 24,482.45		120	$ 24,482.45	
Hours Sub-Total for Task defined above	0	0	0	0	0	0		0	120		120	120		120
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -		$ -	$ -		$ 24,482.45	$ 24,482.45		$ 24,482.45	$ 24,482.45

RockSol Labor Cost Subtotal:	0	$ -	**Sub Labor:**	120	$ 24,482.45	**Total Labor:**	120	$ 24,482.45
Mileage	$ 0.545		$0.00					
Reimbursables	$ -		$0.00		$1,200.00			
Image Processing Fee	$ -		$0.00		$900.00			
	$ -		$0.00					
	$ -		$0.00					
	$ -		$0.00					
	$ -		$0.00					
	$ -		$0.00					
	$ -		$0.00					
RockSol Other Direct Costs:		$ -	**Sub Directs:**		$ 2,100.00	**Total Directs:**		$ 2,100.00
RockSol Total Fee:		$ -	**Sub Total Fee:**		$ 26,582.45	**Total Fee:**		$ 26,582.45

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Rocksol Consulting Group: Senior Project Manager (hours)	Staff Engineer II (hours)	Engineer-in-Training II (hours)	Engineer-in-Training I (hours)	Constr. Mgr/Inspector IV (hours)	Staff Engineer I (hours)				Subtotal Hours	Subtotal Fee	Subconsultant SLI: Staff hour totals per task	Staff cost totals per task	Total Hours	Total Fee
Billing Rate	$ 174.20	$ 155.10	$ 118.77	$ 104.02	$ 179.37	$ 147.40									
Traffic Engineering	Wessell	Parks	Beardwell	Staff	Lancaster	Hender									
A. PRELIMINARY ENGINEERING										0	$ -			0	$ -
a) Review project area for crash reduction										0	$ -			0	$ -
b) Analyze proposed design with traffic projections										0	$ -			0	$ -
c) Recommend geometry										0	$ -			0	$ -
d) Review design for existing signing compatibility						8				8	$ 1,179.04			8	$ 1,179.04
e) Use traffic data to develop detours		8				12				20	$ 3,001.20			20	$ 3,001.20
f) Develop the Total ESAL										0	$ -			0	$ -
g) Determine compatibility with future multi-modal		8								8	$ 1,321.44			8	$ 1,321.44
h) Develop ped safety for US 6/7th St intersection					8	18				24	$ 3,703.04			24	$ 3,703.04
i) Develop and submit traffic memorandum										0	$ -	40	$ 6,000.00	40	$ 6,000.00
										60	$ [illegible]	40	$ [illegible]	100	$ [illegible]
B. FINAL ENGINEERING										0	$ -			0	$ -
a) Prepare signing and pavement marking plans		2				80				82	$ 12,128.76			82	$ 12,128.76
b) Finalize US 6/7th St ped crossing		1			12	16				29	$ 4,676.10			29	$ 4,676.10
c) Develop construction traffic control plans		8				24				32	$ 4,880.96			32	$ 4,880.96
										143	$ [illegible]	0	$ -	143	$ [illegible]
Hours Sub-Total for Task defined above	0	17	0	0	20	156	0	0	0	203		40		243	
Engineering Fee Sub-Total for Task defined above	$ -	$ 4,[illegible]	$ -	$ -	$ [illegible]	$ 13,[illegible]	$ -	$ -	$ -		$ 31,052.14		$ 6,000.00		$ 37,052.14

203   $ 31,052.14   243 $ 37,052.14

Rocksol Labor Cost Subtotals	203	$ 31,052.14	Sub Labor:	40	$ 6,000.00	Total Labor:	243	$ 37,052.14
Mileage	$ 0.545	$0.00						
Traffic counts	$ 5,000.00							
	$ -	$0.00						
	$ -	$0.00						
	$ -	$0.00						
	$ -	$0.00						
	$ -	$0.00						
	$ -	$0.00						
	$ -	$0.00						
Rocksol Other Direct Costs		$ -	Sub Directs		$ -	Total Directs		$ -
Rocksol Total Fees		$ 31,052.14	Sub Total Fees		$ 6,000.00	Total Fees		$ 37,052.14

Preliminary engineering
Task will review SLI traffic study, ask CDOT for update crash data, ensure two-lane frontage road is appropriate and no turn lanes are needed, develop ped [illegible] site for US 6/7th St intersection, review existing signing to begin discussion of changes and wayfinding. Begin construction traffic control and phasing.

Final engineering
Complete work items

ELK I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Elk

Task Breakdown	Senior Geotechnical Engineer (hours)	Senior Geologist (hours)	Staff Engineer I (hours)	Staff Engineer I (hours)	Senior Project Engineer (hours)	Technician II (hours)	Technician IV (hours)	Staff Engineer I (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee	Subconsultant (Name): Staff hour totals per task	Staff cost totals per task	Total Hours	Total Fee
	Rockfall Consulting Group														
Billing Rate	$ 157.07	$ 183.43	$ 147.40	$ 147.40	$ 210.41	$ 94.63	$ 130.06	$ 147.40	$ 105.61						
Geotechnical Investigation	Hunt	Lopez	Shoen	Beardsell	Goldbaum	Staff	Staff	Phillips	Staff						
A. PRELIMINARY ENGINEERING										0	$ -			0	$ -
Task Management										0	$ -			0	$ -
Initial Project Meeting	2									2	$ 314.14			2	$ 314.14
Progress Meetings (with Town of Elk) (10 each, up to 3 in-person)										0	$ -			0	$ -
Virtual (10)	1		2							3	$ 452.03			3	$ 452.03
In-person (up to 3) (8 hrs each total, includes 4 hrs drive time total)										0	$ -			0	$ -
Internal Project Coordination Meetings (12 each)	1		2							3	$ 452.03			3	$ 452.03
30% Preliminary Design Review Meeting			4							4	$ 589.62			4	$ 589.62
Materials										0	$ -			0	$ -
a) Determine Test Hole Locations	1	1	1							3	$ 488.30			3	$ 488.30
b) Pre-mark borehole locations/ROW Permit Submittal/Utility Locates		24								24	$ 3,927.60			24	$ 3,927.60
c) Collect Soil Samples		100								100	$ 16,365.00			100	$ 16,365.00
c) Laboratory Testing and Analysis	4		8			180	18	24	8	242	$ 26,127.30			242	$ 26,127.30
d) Geotechnical and Pavement Investigation Evaluation and Drafting	4	8	64	24				16		116	$ 17,675.40			116	$ 17,675.40
d) Geotechnical and Pavement Investigation Report Preparation and Draft Submittal	6	8	24					8		46	$ 7,570.90			46	$ 7,570.90
Pavement										0	$ -			0	$ -
a) Develop feasible alternatives for Frontage Road and Parking Lot	1		4		8			8		21	$ 3,710.11			21	$ 3,710.11
b) Pavement Justification			4		8			8		20	$ 3,453.04			20	$ 3,453.04
c) Pavement Report (combined with Geotechnical Report)			4		8			8		20	$ 3,453.04			20	$ 3,453.04
										604	$ [illegible]			604	$ [illegible]
B. FINAL ENGINEERING										0	$ -			0	$ -
Task Management										0	$ -			0	$ -
Progress Meetings (with Town of Elk) (15 each, up to 3 in-person)										0	$ -			0	$ -
Virtual (10)	1		1							2	$ 404.53			2	$ 404.53
In-person (up to 3) (8 hrs each total, includes 4 hrs drive time total)										0	$ -			0	$ -
Internal Project Coordination Meetings (12 each)	1		1							2	$ 404.53			2	$ 404.53
60% Preliminary Design Review Meeting	4									4	$ 1,028.28			4	$ 1,028.28
Materials and Pavement										0	$ -			0	$ -
[illegible] design	2	4	24					4		34	$ 5,298.10			34	$ 5,298.10
										42	$ 7,135.58			42	$ 7,135.58
Hours Sub-Total for Sub-Tasks defined above	28	145	143	24	24	180	18	78	8	646		0		646	
Engineering Fee Sub-Total for Sub-Tasks defined above	$ 7,177.98	$ 23,730.13	$ 21,[illegible]	$ 3,530.52	$ 5,050.04	$ 17,033.00	$ 2,301.30	$ 11,300.40	$ 844.88		$ 92,194.25		$ -		$ 92,194.25

646 $ 92,194.25 0 646 $ 92,194.25

			Rockfall Labor Cost Subtotals	646 $ 92,194.25
Mileage (370 miles round trip - 2 trips)	740	$ 0.600		$444.00
Drilling (9 bridge, 5 pavement, 2 retaining wall) (see attached drill estimate)	1	$ 44,098.00		$44,098.00
		$ -		$0.00
Borehole Backfill and Pavement Patch Materials	16	$ 50.00		$800.00
Traffic control for geotechnical (3 days with two flaggers)	3	$ 1,800.00		$5,400.00
R-Value Tests (4)	4	$ 400.00		$1,600.00
Pavement Cores (4)	4	$ 200.00		$800.00
Hotel (10 nights)	10	$ 175.00		$1,750.00
Per Diem (10 days)	10	$ 100.00		$1,000.00

Sub Labor	0	$ -	
Total Labor	646	$ 92,194.25	
Rockfall Other Direct Costs	$ 55,863.00	Sub Directs	$ -
Rockfall Total Fees	$ 148,057.25	Sub Total Fees	$ -
Total Directs	$ 55,863.00		
Total Fees	$ 148,057.25		

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Rocksol Consulting Group										Subtotal Hours	Subtotal Fee		Subconsultant [illegible] Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate																			
Hydrology and Hydraulics																			
A. PRELIMINARY ENGINEERING											0	$ -					0	$ -	
Data Collection and Hydrology											0	$ -					0	$ -	
a) Establish Drainage Basin Data											0	$ -					0	$ -	
b) Collect Historic Data											0	$ -					0	$ -	
c) Complete a Project Site Visit											0	$ -					0	$ -	
d) Select a Design Storm Frequency											0	$ -					0	$ -	
e) Complete a Hydrological Analysis											0	$ -					0	$ -	
f) Analyze Peak Flows											0	$ -					0	$ -	
Hydraulics											0	$ -					0	$ -	
a) Complete Design of Minor Drainage Structures											0	$ -					0	$ -	
b) Complete Permanent Water Quality Control Measures documentation and concept plan											0	$ -					0	$ -	
c) Develop preliminary layout and plans											0	$ -					0	$ -	
d) Develop Preliminary Drainage Report											0	$ -					0	$ -	
e) Develop Pipe Material Selection Report											0	$ -					0	$ -	
											0	$ -		100	$ 15,044.00		100	$ 15,044.00	
B. FINAL ENGINEERING											0	$ -					0	$ -	
a) Data review, update design from 30% design											0	$ -					0	$ -	
b) Complete hydraulics final design											0	$ -					0	$ -	
c) Complete final design and plans											0	$ -					0	$ -	
d) Revise Preliminary Drainage Report and develop Final Report											0	$ -					0	$ -	
											0	$ -		104	$ 14,969.76		104	$ 14,969.76	
Hours Sub-Total for Task defined above	0	0	0	0	0	0	0	0	0	0	0		0	204		204	204		204
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -		$ 30,013.76	$ 30,013.76		$ 30,013.76	$ 30,013.76

Rocksol Labor Cost Subtotal	0	$ -	Sub Labor:	1430	$ 30,013.76	Total Labor:	204	$ 30,013.76
Mileage $ 0.600		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
$ -		$0.00						
Rocksol Other Direct Costs	$ -		Sub Directs:		$ -	Total Directs:		$ -
Rocksol Total Fees	$ -		Sub Total Fees		$ 30,013.76	Total Fees:		$ 30,013.76
			Cbar Crosk:	0	$ -			

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	[illegible] Consulting Group										Subtotal Hours	Subtotal Fee	Subconsultant [illegible]: Staff hour totals per task	Subconsultant [illegible]: Staff cost totals per task	Total Hours	Total Fee
Billing Rate																
Floodplain Assessment and Management																
A. PRELIMINARY ENGINEERING											0	$ -			0	$ -
b) Identify location and assess impacts											0	$ -			0	$ -
c) Add to environmental resource mapping											0	$ -			0	$ -
d) Determine adverse impacts											0	$ -			0	$ -
e) f) Analyze impacts and develop mitigation alternatives											0	$ -			0	$ -
g) Prepare Floodplain Information Sheet											0	$ -			0	$ -
h) Prepare Preliminary Floodplain Technical Memorandum											0	$ -			0	$ -
											0	$ -	110	$ 17,186.54	110	$ 17,186.54
B. FINAL ENGINEERING											0	$ -			0	$ -
a) Revise Preliminary Floodplain Memo to Final Memo											0	$ -			0	$ -
b) Provide floodplain development permit and acceptable rise documentation											0	$ -			0	$ -
c) Incorporate requirements into plans											0	$ -			0	$ -
d) Identify future actions											0	$ -			0	$ -
											0	$ -	82	$ 13,065.96	82	$ 13,065.96
Hours Sub-Total for Task defined above	0	0	0	0	0	0	0	0	0	0	0		192		192	
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -		$ [illegible]		$ [illegible]

Outside the table, to the right of the subtotal rows: 0 / $ - (after the Subtotal Fee column); 192 / $ 30,252.50 (after the subconsultant columns); 192 / $ 30,252.50 (after the Total Fee column).

[illegible] Labor Cost Subtotal	0	$	-	Sub Labor	1430	$ 30,252.50	Total Labor	192	$ 30,252.50
Mileage	$ 0.600		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
	$ -		$0.00						
[illegible] Other Direct Costs		$	-	Sub Directs		$ -	Total Directs		$ -
[illegible] Total Fees		$	-	Sub Total Fees		$ 30,252.50	Total Fees		$ 30,252.50
				Clear Check	0	$ -			

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	RockSol Consulting Group: Environmental Manager (hours)	Environmental Specialist I (hours)	Environmental Specialist II (hours)	Project Control and Admin (hours)			Subtotal Hours	Subtotal Fee		Subconsultant ARCH: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 169.70	$ 105.02	$ 125.04	$ 105.61											
Environmental															
A. PRELIMINARY ENGINEERING							0	$ -					0	$ -	
Task Management							0	$ -							
Initial Project Meeting	2						2	$ 339.40							
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)							0	$ -							
Virtual (10)	3						3	$ 509.10							
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)							0	$ -							
Internal Project Coordination Meetings (12 each)	4						4	$ 678.80							
30% Preliminary Design Review Meeting	4						4	$ 678.80							
Water Quality							0	$ -					0	$ -	
a) SWMP Narrative	1		6				7	$ 922.04					7	$ 922.04	
NEPA Compliance							0	$ -					0	$ -	
a) CDOT scoping meeting							0	$ -					0	$ -	
b) Resource constraints coordinated with design							0	$ -					0	$ -	
c1) Biological Resources (site visit)		16					16	$ 1,680.32					16	$ 1,680.32	
c2) Biological Resource Report*	2	24					26	$ 2,871.88					26	$ 2,871.88	
d) Hazardous Materials Initial Site Assessment Memo	1		16				17	$ 2,170.34					17	$ 2,170.34	
e) Cultural Resources Clearance							0	$ -		36	$ 5,087.00		36	$ 5,087.00	
f) Other Resource Assessments (nonaffected resources memos - air quality, noise, noxious weeds compliance)	2		12				14	$ 1,843.88					14	$ 1,845.88	
							0	$ -					0	$ -	
							53	$ 11,713.46		36	$ 5,087.00		129	$ 16,800.46	
B. FINAL ENGINEERING															
Task Management							0	$ -					0	$ -	
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)							0	$ -					0	$ -	
Virtual (15)	3						3	$ 509.10					3	$ 509.10	
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)							0	$ -					0	$ -	
Internal Project Coordination Meetings (12 each)	3						3	$ 509.10					3	$ 509.10	
90% Preliminary Design Review Meeting	4						4	$ 678.80					4	$ 678.80	
Environmental Permits							0	$ -					0	$ -	
Water Quality							0	$ -					0	$ -	
a) SWMP	1		6				7	$ 922.04					7	$ 922.04	
NEPA Compliance							0	$ -					0	$ -	
a) Coordinate clearances with CDOT	2						2	$ 339.40					2	$ 339.40	
b) Complete resource documentation	1	2	2				5	$ 631.82					5	$ 631.82	
Task management and meetings	4	2	2				8	$ 1,140.82					8	$ 1,140.82	
							32	$ 4,732.00		0	$ -		32	$ 4,732.00	
Hours Sub-Total for Task defined above	37	44	44	0	0	0	125		125	36		36	161		161
Engineering Fee Sub-Total for Task defined above	$ 6,278.90	$ 4,642.08	$ 5,522.76	$ -	$ -	$ -		$ 16,445.54	$ 16,445.54		$ 5,087.00	$ 5,087.00		$ 21,532.54	$ 21,532.54

*Assumes no Section 7 Consultation with USFWS and No 404 Permitting

Rocksol Labor Cost Subtotal:		125	$ 16,445.54	Sub Labor:	36	$ 5,087.00	Total Labor:	161	$ 21,532.54
Mileage	370	$ 0.600	$222.00						
Miscellaneous supplies	1	$ 200.00	$200.00						
		$ -	$0.00						
		$ -	$0.00						
		$ -	$0.00						
		$ -	$0.00						
		$ -	$0.00						
		$ -	$0.00						
		$ -	$0.00						
Rocksol Other Direct Costs:			$ 422.00	Sub Directs:		$ -	Total Directs:		$ 422.00
Rocksol Total Fee:			$ 16,867.54	Sub Total Fee:		$ 5,087.00	Total Fee:		$ 21,954.54

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Rockshol Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Staff Engineer (hours)	Engineer-in-Training II (hours)	Engineer-in-Training I (hours)	Design Technician I (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee		Subconsultant Kinetic: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 274.29	$ 232.35	$ 165.18	$ 118.77	$ 104.82	$ 80.84	$ 103.81									
Utility Coordination & Plans	Wessell	Miller	Clouse	Schmidt	Staff	Pugh	Staff									
A. PRELIMINARY ENGINEERING								0	$ -					0	$ -	
Task Management								0	$ -					0	$ -	
Initial Project Meeting			2					2	$ 330.36					2	$ 330.36	
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)								0	$ -					0	$ -	
Virtual (10)			3					3	$ 495.54					3	$ 495.54	
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)			1					1	$ 165.18					1	$ 165.18	
Internal Project Coordination Meetings (12 each)			3	3				6	$ 845.85					6	$ 845.85	
30% Preliminary Design Review Meeting			4					4	$ 660.72					4	$ 660.72	
SUE and Utility Coordination								0	$ -					0	$ -	
a) Incorporate Subsurface Utility Engineering (SUE) Quality Levels								0	$ -					0	$ -	
b) Obtain Utility Location Maps			6					6	$ 991.08					6	$ 991.08	
b) Requests and Receipt of Maps			2	4				6	$ 797.44					6	$ 797.44	
c) Conduct Field Reviews and Utility Investigations			12	40		8		60	$ 7,299.60					60	$ 7,299.60	
c.i. Coordinate potholing and locations								0	$ -					0	$ -	
c.ii. Potholing								0	$ -					0	$ -	
c.iii. Organize potholing results								0	$ -					0	$ -	
d) e) Differentiate Existing and Proposed Utilities			2	16				18	$ 2,198.60					18	$ 2,198.60	
f) Relocation Recommendations		2	8	8		6		24	$ 3,205.34					24	$ 3,205.34	
g) Submit Preliminary Plans to utility owners			2					2	$ 330.36					2	$ 330.36	
Utility Meetings			8					8	$ 1,321.44					8	$ 1,321.44	
								140	$ 16,641.67		0	0		140	$ 16,641.67	
B. FINAL ENGINEERING																
Task Management								0	$ -					0	$ -	
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)								0	$ -					0	$ -	
Virtual (10)			3					3	$ 495.54					3	$ 495.54	
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)			6					6	$ 991.08					6	$ 991.08	
Internal Project Coordination Meetings (12 each)			3	3				6	$ 845.85					6	$ 845.85	
90% Preliminary Design Review Meeting			4					4	$ 660.72					4	$ 660.72	
SUE and Utility Coordination								0	$ -					0	$ -	
a) Prepare and provide final utility plans		4	2	8		4		18	$ 2,517.20					18	$ 2,517.20	
a) Prepare and provide final utility specification			2	8				10	$ 1,264.52					10	$ 1,264.52	
b) Prepare and provide final railroad plans			4			8		12	$ 1,307.44					12	$ 1,307.44	
Utility Meetings			8					8	$ 1,321.44					8	$ 1,321.44	
								67	$ 9,403.87		0	0		67	$ 9,403.87	
Hours Sub-Total for Task defined above	0	6	72	87	0	26	0	191		207	0		0	191		207
Engineering Fee Sub-Total for Task defined above	$ -	$ 1,394.10	$ 11,892.96	$ 10,150.00	$ -	$ 2,101.84	$ -		$ 25,547.00	$ 20,045.54		$ -	$ -		$ 25,547.00	$ 20,045.54

	Rockshol Labor Cost Subtotal:	191	$ 25,547.00	
Mileage	740 $ 0.600		$444.00	
Designating	1 $ 2,325.00		$2,325.00	
Test holes	1 $ 30,200.00		$30,200.00	
	$ -		$0.00	
	$ -		$0.00	
	$ -		$0.00	
	$ -		$0.00	
	$ -		$0.00	
	$ -		$0.00	
	Rockshol Other Direct Costs:		$ 32,969.00	
	Rockshol Total Fee:		$ 58,516.00	

Sub Labor:	0	$ -	
Sub Directs:		$ -	
Sub Total Fee:		$ -	

Total Labor:	191	$ 25,547.00
Total Directs:		$ 32,969.00
Total Fee:		$ 58,516.00

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Senior Project Manager (hours)	Staff Engineer II (hours)	Engineer-in-Training II (hours)	Engineer-in-Training I (hours)	Staff Engineer II (hours)	Senior Project Engineer (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee	Subconsultant [illegible]: Staff hour totals per task	Subconsultant [illegible]: Staff cost totals per task	Total Hours	Total Fee
	[illegible] Consulting Group												
Billing Rate	$ 274.30	$ 165.10	$ 116.77	$ 104.02	$ 165.10	$ 210.41							
Roadway, Parking Lot, Sidewalk Design	Wessel	Fortin	Bearden	Staff	Chase	Staff							
A. PRELIMINARY ENGINEERING								0	$ -			0	$ -
Task Management								0	$ -			0	$ -
Initial Project Meeting		2	2					4	$ 563.00			4	$ 563.00
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)								0	$ -			0	$ -
Virtual (10)		4	2					6	$ 894.36			6	$ 894.36
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)		6						6	$ 991.00			6	$ 991.00
Internal Project Coordination Meetings (12 each)		4	4					8	$ 1,127.00			8	$ 1,127.00
Road and Trail Design								0	$ -	441	$ 70,630.11	441	$ 70,630.11
a) Coordinate design with Town and outside entities		6						6	$ 991.00			6	$ 991.00
b) Roadway and trail design		6	36					42	$ 5,194.00			42	$ 5,194.00
c) Roadside development		6	20					26	$ 3,326.40			26	$ 3,326.40
Construction Phasing Plan		1		54	6			61	$ 6,773.34			61	$ 6,773.34
Prepare for 30% Design Review								0	$ -			0	$ -
a) b) Prepare plans		8	76	76				160	$ 18,161.40			160	$ 18,161.40
c) Develop quantities and cost estimate		4	24					28	$ 3,463.20			28	$ 3,463.20
d) e) Distribute 30% documents		2						2	$ 330.36			2	$ 330.36
Quality control						18		18	$ 3,787.38			18	$ 3,787.38
30% Design Review								0	$ -			0	$ -
a) Prepare for meeting		2	2					4	$ 563.00			4	$ 563.00
b) Attend meeting	3	3	3					9	$ 1,668.72			9	$ 1,668.72
c) Summarize meeting		1	4					5	$ 632.36			5	$ 632.36
								[illegible]	$ [illegible]	[illegible]	$ 70,630.11	[illegible]	$ [illegible]
B. FINAL ENGINEERING													
Task Management								0	$ -			0	$ -
Progress Meetings (with Town of Silt) (15 each, up to 5 in-person)								0	$ -			0	$ -
Virtual (10)		6	3					9	$ 1,341.30			9	$ 1,341.30
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)		12						12	$ 1,983.16			12	$ 1,983.16
Internal Project Coordination Meetings (12 each)		8	8					16	$ 2,255.00			16	$ 2,255.00
Road and Trail Design								0	$ -	462	$ 71,030.30	462	$ 71,030.30
a) Coordinate design with Town and outside entities		4						4	$ 660.72			4	$ 660.72
b) Roadway and trail design		4	40					44	$ 5,331.52			44	$ 5,331.52
c) Roadside development		4	24					28	$ 3,463.20			28	$ 3,463.20
Construction Phasing Plan		1		24	3			28	$ 3,157.30			28	$ 3,157.30
Prepare for 90% Design Review								0	$ -			0	$ -
a) Prepare plans		8	80	60				148	$ 16,904.34			148	$ 16,904.34
b) Develop project special provisions	3	24	2					29	$ 4,746.44			29	$ 4,746.44
c) Develop quantities and cost estimate		4	24					28	$ 3,463.20			28	$ 3,463.20
d) Distribute 90% documents		2	2					4	$ 563.00			4	$ 563.00
Quality control						24		24	$ 5,049.84			24	$ 5,049.84
90% Design Review								0	$ -			0	$ -
a) Prepare for meeting		2	2					4	$ 563.00			4	$ 563.00
b) Attend meeting	3	3	3					9	$ 1,668.72			9	$ 1,668.72
c) Summarize meeting		1	4					5	$ 632.36			5	$ 632.36
Construction Documents		16	80	40	1			137	$ [illegible]	140	$ 23,606.09	[illegible]	$ [illegible]
								[illegible]	$ 70,175.12	[illegible]	$ [illegible]	[illegible]	$ [illegible]
												0	$ -
Hours Sub-Total for Task defined above	9	184	445	274	10	42	0	933		1083		[illegible]	
Engineering Fee Sub-Total for Task defined above	$ 3,194.32	$ 30,437.72	$ 51,963.65	$ [illegible]	$ 1,651.00	$ 8,837.22	$ -		$ [illegible]		$ 165,274.43		$ [illegible]

Check: 933; $ 118,383.10
Check: 1083; $ 165,274.43
Check: [illegible]; $ 283,658.41

Rocktol Labor Cost Subtotal	933	$ 118,383.10	Sub Labor	1083	$ 165,274.43	Total Labor
						[illegible] $ 283,658.41
Mileage $ 0.545		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
$ -		$0.00				
Rocktol Other Direct Costs		$ -	Sub Direct		$ -	Total Direct $ -
Rocktol Total Fees		$ 118,383.10	Sub Total Fees		$ 165,274.43	Total Fees $ 283,658.41

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	RockSol Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Engineer-in-Training II (hours)	Project Control and Admin (hours)		Subtotal Hours	Subtotal Fee		Subconsultant KLJ: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 210.00	$ 175.00	$ 97.00	$ 87.00										
Right-of-Way Documents & Plans														
A. PRELIMINARY ENGINEERING						0	$ -					0	$ -	
a) Research						0	$ -					0	$ -	
b) Ownership Map						0	$ -		80	$ 9,980.28		80	$ 9,980.28	
						0	$ -		80	$ 9,980.28		80	$ 9,980.28	
B. FINAL ENGINEERING														
a) Initiate ROW authorization Process														
b) Ownership Map														
c) Authorization Plans														
d) Right of Way Plan Revisions									136	$ 17,175.70				
						0	$ -		136	$ 17,175.70		136	$ 17,175.70	
Hours Sub-Total for Task defined above	0	0	0	0	0	0		0	216		216	216		216
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -		$ -	$ -		$ 27,155.98	$ 27,155.98		$ 27,155.98	$ 27,155.98

RockSol Labor Cost Subtotal:	0	$ -	Sub Labor:	216	$ 27,155.98	Total Labor: 216 $ 27,155.98
Mileage	$ 0.545		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
	$ -		$0.00			
RockSol Other Direct Costs:		$ -	Sub Directs:		$ -	Total Directs: $ -
RockSol Total Fee:		$ -	Sub Total Fee:		$ 27,155.98	Total Fee: $ 27,155.98

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	RockSol Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Staff Engineer (hours)	Engineer-In-Training II (hours)	Engineer-In-Training I (hours)	Design Technician I (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee		Subconsultant Britina: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 274.29	$ 232.35	$ 165.18	$ 116.77	$ 104.62	$ 80.84	$ 105.61									
Landscape Architecture																
A. PRELIMINARY ENGINEERING								0	$ -					0	$ -	
a) Coordinate activities with preliminary design and Town								0	$ -					0	$ -	
b) Develop designs								0	$ -					0	$ -	
c) Areas include north side, south side, bridge								0	$ -					0	$ -	
								0	$ -		200	$ 31,530.00		200	$ 31,530.00	
B. FINAL ENGINEERING																
a) Finalize concepts								0	$ -					0	$ -	
b) Verify clear zone from plantings								0	$ -					0	$ -	
c) Coordinate special permits								0	$ -					0	$ -	
d) Verify availability of plant materials								0	$ -					0	$ -	
								0	$ -		280	$ 43,300.00		280	$ 43,300.00	
Hours Sub-Total for Task defined above	0	0	0	0	0	0	0	0		0	480		480	480		480
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -		$ 74,830.00	$ 74,830.00		$ 74,830.00	$ 74,830.00

			RockSol Labor Cost Subtotal:	0	$ -	Sub Labor:	480	$ 74,830.00	Total Labor:	480 / $ 74,830.00
Mileage	740	$ 0.600			$444.00					
Expenses - preliminary design	1	$ 2,000.00			$2,000.00					
Expenses - final design	1	$ 2,500.00			$2,500.00					
		$ -			$0.00					
		$ -			$0.00					
		$ -			$0.00					
		$ -			$0.00					
		$ -			$0.00					
		$ -			$0.00					
			RockSol Other Direct Costs:		$ 4,944.00	Sub Directs:		$ -	Total Directs:	$ 4,944.00
			RockSol Total Fee:		$ 4,944.00	Sub Total Fee:		$ 74,830.00	Total Fee:	$ 79,774.00

SILT I-70 SIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	Rocktiel Consulting Group: Senior Project Manager (hours)	Staff Engineer II (hours)	Structural Engineer III (hours)	Structural Engineer I (hours)	Engineer-in-Training II (hours)	Engineer-in-Training I (hours)	Design Technician II (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee	Subconsultant Coorps: Staff hour totals per task	Staff cost totals per task	Total Hours	Total Fee
Billing Rate:	$ 174.39	$ 172.00	$ 170.43	$ 147.68	$ 116.77	$ 104.62	$ 89.04	$ 87.88						
Structural Design	Wessel	Perin	Adams	Kelly	Pepper	Garcia	Pugh	Staff						
A. PRELIMINARY ENGINEERING									0	$ -			0	$ -
Task Management									0	$ -			0	$ -
Initial Project Meeting			2						2	$ 340.86			2	$ 340.86
Program Meetings (with Town of Silt) (15 each, up to 5 in-person)									0	$ -			0	$ -
Virtual (10)			4						4	$ 681.80			4	$ 681.80
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)			1						1	$ 170.45			1	$ 170.45
Internal Project Coordination Meetings (12 each)			5						5	$ 852.25			5	$ 852.25
30% Preliminary Design Review Meeting			4						4	$ 681.80			4	$ 681.80
Structural Engineering									0	$ -			0	$ -
a) Structural Data Collection			4		16		30		50	$ 4,975.32			50	$ 4,975.32
b) Structure Selection and Layout			18		40	46	80		184	$ 18,886.86			184	$ 18,886.86
c) Structure Selection Report			4	20	40				64	$ 8,302.30			64	$ 8,302.30
									314	$ 34,881.64	0	$ -	314	$ 34,881.64
B. FINAL ENGINEERING														
Task Management									0	$ -			0	$ -
Program Meetings (with Town of Silt) (15 each, up to 5 in-person)									0	$ -			0	$ -
Virtual (10)			6						6	$ 1,022.70			6	$ 1,022.70
In-person (up to 5) (6 hrs each total, includes 4 hrs drive time total)			1						1	$ 170.45			1	$ 170.45
Internal Project Coordination Meetings (12 each)			7						7	$ 1,193.15			7	$ 1,193.15
90% Preliminary Design Review Meeting			4						4	$ 681.80			4	$ 681.80
Structural Engineering									0	$ -			0	$ -
a) Structure Final Design			34	60	80	80			244	$ 30,650.80			244	$ 30,650.80
b) Prepare structure plans and specifications			13	40	60		100		312	$ 31,118.80			312	$ 31,118.80
c) Independent design check									0	$ -	100	$ 15,000.00	100	$ 15,000.00
d) Prepare bridge rating and field package			16		40	20			76	$ 9,498.40			76	$ 9,498.40
									650	$ 74,338.10	100	$ 15,000.00	750	$ 89,338.10
Hours Sub-Total for Task defined above	0	0	110	120	276	146	318	0	964		100		1064	
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ 18,740.39	$ 17,697.60	$ 32,238.83	$ 15,283.76	$ 28,308.40	$ -		$ 108,118.78	$ 109,219.78	$ 15,000.00	$ 30,000.00	$ 124,219.78

Rocktiel Labor Cost Subtotal	964	$ 108,118.78	Sub Labor:	100
Mileage	$ 0.545	$0.00		
	$ -	$0.00		
	$ -	$0.00		
	$ -	$0.00		
	$ -	$0.00		
	$ -	$0.00		
	$ -	$0.00		
	$ -	$0.00		
Rocktiel Other Direct Costs:		$ -	Sub Direct:	
Rocktiel Total Fee:		$ 108,118.78	Sub Total Fee:	

Total Labor:	1064	$	124,219.78
Total Direct:		$	-
Total Fee:		$	124,219.78

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of SIX

Effort to Conduct Tasks needed to accomplish Scope of Work	Rockfel Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Staff Engineer (hours)	Engineer-In-Training I (hours)	Engineer-In-Training II (hours)	Design Technician II (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee	Subconsultant SLJ: Staff hour totals per task	Staff cost totals per task	Total Hours	Total Fee
Billing Rate	$ 274.39	$ 233.33	$ 168.10	$ 116.77	$ 104.63	$ 80.84	$ 108.61						
Landscape Architecture													
A. PRELIMINARY ENGINEERING													
a) Develop initial layout and fixture types for road, parking lot, bridge, and pedestrians								0	$ -			0	$ -
								0	$ -			0	$ -
								0	$ -			0	$ -
								0	$ -	68	$ 9,569.12	68	$ 9,569.12
B. FINAL ENGINEERING													
a) Finalize design and plans								0	$ -			0	$ -
								0	$ -			0	$ -
								0	$ -	108	$ 14,124.91	108	$ 14,124.91
Hours Sub-Total for Task defined above	0	0	0	0	0	0	0	0		0	176	176	176
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ 23,694.03	$ 23,694.03	$ 23,694.03
						Rockfel Labor Cost Subtotal:		0	$ -	Sub Labor:	176	$ 23,694.03	Total Labor: 176	$ 23,694.03
				Mileage		0	$ 0.655		$0.00				
							$ -		$0.00				
							$ -		$0.00				
							$ -		$0.00				
							$ -		$0.00				
							$ -		$0.00				
							$ -		$0.00				
							$ -		$0.00				
						Rockfel Other Direct Costs:			$ -	Sub Directs:		$ -	Total Directs:	$ -
						Rockfel Total Fee:			$ -	Sub Total Fee:		$ 23,694.03	Total Fee:	$ 23,694.03

SILT I-70 BIKE AND PEDESTRIAN OVERPASS
Town of Silt

Effort to Conduct Tasks needed to accomplish Scope of Work	RockSol Consulting Group: Senior Project Manager (hours)	Senior Project Engineer (hours)	Staff Engineer (hours)	Engineer-In-Training II (hours)	Engineer-In-Training I (hours)	Design Technician I (hours)	Project Control and Admin (hours)	Subtotal Hours	Subtotal Fee		Subconsultant KLJ: Staff hour totals per task	Staff cost totals per task		Total Hours	Total Fee	
Billing Rate	$ 274.29	$ 232.35	$ 165.18	$ 116.77	$ 104.62	$ 80.84	$ 105.61									
Waterline and Sanitary Sewer Design																
A. PRELIMINARY ENGINEERING								0	$ -					0	$ -	
a) Develop preliminary relocation design and plans								0	$ -					0	$ -	
								0	$ -					0	$ -	
								0	$ -		136	$ 19,175.02		136	$ 19,175.02	
B. FINAL ENGINEERING																
a) Finalize design								0	$ -					0	$ -	
b) Prepare plans, profiles, and details per owner								0	$ -					0	$ -	
								0	$ -		128	$ 17,305.18		128	$ 17,305.18	
Hours Sub-Total for Task defined above	0	0	0	0	0	0	0	0		0	264		264	264		264
Engineering Fee Sub-Total for Task defined above	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -		$ 36,480.20	$ 36,480.20		$ 36,480.20	$ 36,480.20

		RockSol Labor Cost Subtotal:	0	$ -	Sub Labor:	264	$ 36,480.20	Total Labor:	264 $ 36,480.20
Mileage	0	$ 0.600		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		$ -		$0.00					
		RockSol Other Direct Costs:		$ -	Sub Directs:		$ -	Total Directs:	$ -
		RockSol Total Fee:		$ -	Sub Total Fee:		$ 36,480.20	Total Fee:	$ 36,480.20