



Amendment to Agreement for Professional Services

Project #2103-01555

Amendment # 2

Background Data

a. Effective Date of Agreement for Professional Services	<u>February 26, 2025</u>
b. Engineer	<u>KLJ Engineering LLC</u>
c. Owner	<u>Huerfano County, Colorado (County)</u>
d. Project	<u>Huerfano River Bridge Rehabilitation</u>
e. This Part of the Project	<u>Construction Administration</u>

Nature of Amendment (check all that apply)

- Additional services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications to payment to Engineer
- Modifications to time(s) for rendering Services

Description of Modifications:

:

- **Original Agreement Amended per this Amendment:**
This amendment amends the existing agreement titled Agreement Between Owner and Engineer for Professional Design Services, dated February 1, 2022 included herewith as Exhibit A.2.
- **Adding the following services to the Agreement:**
Based on the scope of work outlined below, we are pleased to offer our services for an estimated fee of \$89,616 as outlined in the project budget spread sheet attached herewith as Exhibit B.2. This estimated fee will be billed on a Time and Materials (T&M) basis. Please note that the estimated fee is subject to change based on the actual time spent by personnel and the cost of materials required for the project. We will provide detailed invoices reflecting the actual time and materials utilized. This scope of work and fee is developed based on CDOT Construction Oversight Checklist for Local Agency Projects

Construction Oversight Assistance to County (Design Questions, RFIs, Change Order Support, Construction Observation, Construction Administration)

- 1) Design Questions and Clarifications:
 - a) Serve as a point of contact for the County to address design-related questions and clarifications raised by the contractor or construction team.
 - b) Review design drawings, specifications, and other project documents to provide accurate interpretation and understanding of the design intent.

- 2) Requests for Information (RFIs):
 - a) Assist the County in responding to RFIs received from the contractor during the construction phase.
 - b) Review RFIs, identify the design or documentation gaps, and provide accurate and comprehensive responses.
 - c) Facilitate communication between the County, contractor, and design team to provide timely resolution of RFIs and minimize delays.

- 3) Change Order Support:
 - a) Provide assistance to the County in evaluating change order requests submitted by the contractor during construction.
 - b) Review change order proposals and assess their impact on the project's scope, schedule, and budget.
 - c) Collaborate with the project team to determine the feasibility and necessity of change orders and provide recommendations to the County.

- 4) Construction Documentation and Reporting:
 - a) Maintain accurate records of design-related questions, RFIs, and change orders throughout the construction phase.
 - b) Prepare documentation, such as meeting minutes, correspondence logs, and change order summaries, to provide comprehensive project documentation.
 - c) Generate summaries as needed to provide the County with a clear understanding of design-related activities and decisions during construction.

- 5) Design Compliance and Quality Assurance:
 - a) Collaborate with the County's project team to address design-related deviations, non-compliance, or quality concerns identified during construction.
 - b) Provide recommendations for corrective actions and coordinate with design professionals as necessary to address design-related issues.

- 6) Material Testing and Construction Observations
 - a) Material Testing services will be provided by KLJ's sub-consultant Yeh and Associates (Yeh)
 - b) Yeh will provide construction observations on a part time basis during key milestones during construction and as needed to observe that construction is being completed in general conformance with the plans and specifications.
 - c) Yeh's scope of work and estimated fee are attached herewith as Exhibit C.2.
 - d) KLJ will support Yeh in this task.

- 7) Project Closeout Support:
 - a) Assist the County in the final stages of the construction phase, including reviewing and processing as-built drawings, warranties, and other closeout documentation.
 - b) Coordinate with the project team to provide proper documentation and completion of design-related tasks, such as record drawings, operations and maintenance manuals, and final project reports.

- **Time of Commencement and Completion of Services:**

This amendment will extend Original Agreement terms through August 31, 2025

- **Agreement Summary**

a. Original Agreement amount	<u>\$194,603</u>
b. Net change for prior Amendments	<u>\$0.00</u>
c. This Amendment amount	<u>\$89,616</u>
d. Adjusted Agreement amount	<u>\$284,219</u>

Engineer and Owner hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is

Owner Huerfano County
 Signed _____
 Name _____
 Title _____
 Date _____


Engineer KLJ Engineering LLC
 Signed 
 Name Ben Dzioba
 Title Vice President, Construction Services
 Date March 25, 2025

EXHIBIT A.2

SHORT FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of February 1, 2022 (“Effective Date”) between Huerfano County (“Owner”) and KLJ Engineering LLC (“Engineer”).

Owner’s Project, of which Engineer’s services under this Agreement are a part, is generally identified as follows: Huerfano River Bridge Rehabilitation (“Project”).

Engineer’s services under this Agreement are generally identified as follows: See Exhibit A (“Services”).

Owner and Engineer further agree as follows:

1.1 *Basic Agreement and Period of Service*

- A. Engineer shall provide or furnish the Services set forth in this Agreement. If authorized by Owner, or if required because of changes in the Project, Engineer shall furnish services in addition to those set forth above (“Additional Services”).
- B. Engineer shall complete its Services within the following specific time period: 12 months from the Effective Date. If no specific time period is indicated, Engineer shall complete its Services within a reasonable period of time.
- C. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer’s Services is impaired, or Engineer’s Services are delayed or suspended, then the time for completion of Engineer’s Services, and the rates and amounts of Engineer’s compensation, shall be adjusted equitably.

2.1 *Payment Procedures*

- A. *Invoices:* Engineer shall prepare invoices in accordance with its standard invoicing practices and submit the invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt. If Owner fails to make any payment due Engineer for Services, Additional Services, and expenses within 30 days after receipt of Engineer’s invoice, then (1) the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day, and (2) in addition Engineer may, after giving seven days written notice to Owner, suspend Services under this Agreement until Engineer has been paid in full all amounts due for Services, Additional Services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- B. *Payment:* As compensation for Engineer providing or furnishing Services and Additional Services, Owner shall pay Engineer as set forth in Paragraphs 2.01, 2.02 (Services), and 2.03 (Additional Services). If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion.

2.2 Basis of Payment—Lump Sum

Owner shall pay Engineer for Services as follows:

A Lump Sum amount of \$194,603.

In addition to the Lump Sum amount, reimbursement for the following expenses: \$750 for hotel and meals.

The portion of the compensation amount billed monthly for Engineer's Services will be based upon Engineer's estimate of the percentage of the total Services actually completed during the billing period.

2.3 *Additional Services:* For Additional Services, Owner shall pay Engineer an amount equal to the cumulative hours charged in providing the Additional Services by each class of Engineer's employees, times standard hourly rates for each applicable billing class; plus reimbursement of expenses incurred in connection with providing the Additional Services and Engineer's consultants' charges, if any. Engineer's standard hourly rates are attached as Appendix 1.

3.1 Termination

A. The obligation to continue performance under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the Agreement's terms through no fault of the terminating party. Failure to pay Engineer for its services is a substantial failure to perform and a basis for termination.

b. By Engineer:

1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or

2) upon seven days written notice if the Engineer's Services are delayed for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 5.01.I.

c. Engineer shall have no liability to Owner on account of a termination for cause by Engineer.

d. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under Paragraph 3.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the

same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of written notice from Owner.

- B. In the event of any termination under Paragraph 3.01, Engineer will be entitled to invoice Owner and to receive full payment for all Services and Additional Services performed or furnished in accordance with this Agreement, plus reimbursement of expenses incurred through the effective date of termination in connection with providing the Services and Additional Services, and Engineer's consultants' charges, if any.

4.01 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 4.01.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.
- C. Unless expressly provided otherwise, nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

5.01 *General Considerations*

- A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer. Subject to the foregoing standard of care, Engineer and its consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- B. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Project site, nor for any failure of a Constructor to comply with laws and regulations applicable to such Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.

- C. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform its work.
- D. Engineer's opinions (if any) of probable construction cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by Engineer. If Owner requires greater assurance as to probable construction cost, then Owner agrees to obtain an independent cost estimate.
- E. Engineer shall not be responsible for any decision made regarding the construction contract requirements, or any application, interpretation, clarification, or modification of the construction contract documents other than those made by Engineer or its consultants.
- F. All documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed. Owner shall have a limited license to use the documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all Services and Additional Services relating to preparation of the documents and subject to the following limitations:
 - 1. Owner acknowledges that such documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer;
 - 2. any such use or reuse, or any modification of the documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and consultants;
 - 3. Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the documents without written verification, completion, or adaptation by Engineer; and
 - 4. such limited license to Owner shall not create any rights in third parties.
- G. Owner and Engineer may transmit, and shall accept, Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- H. To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, and (2) agree that Engineer's total liability to Owner

under this Agreement shall be limited to \$100,000 or the total amount of compensation received by Engineer, whichever is greater.

- I. Neither Party shall be considered to be in default of this Agreement if delays in or failure of performance are due to forces beyond the reasonable control of the nonperforming Party, the effect of which the nonperforming Party could not avoid by the exercise of reasonable diligence. Such forces include, but are not limited to: fire, acts of God, flood, earthquake, storm, lightning, tornados, epidemic, war, riot, civil disturbance, sabotage, strike, work slowdown, or other labor disturbances, judicial restraint, action or inaction of any Government entity in either its sovereign or contractual capacity, quarantine restrictions, freight embargoes, delays in long lead time items and severe weather. Any changes to the terms of this agreement impacted by a Force Majeure event shall be documented in an Amendment to the Agreement.
- J. The parties acknowledge that Engineer's Services do not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an unknown or undisclosed Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of Services on the portion of the Project affected thereby until such portion of the Project is no longer affected, or terminate this Agreement for cause if it is not practical to continue providing Services.
- K. Owner and Engineer agree to negotiate each dispute between them in good faith during the 30 days after notice of dispute. If negotiations are unsuccessful in resolving the dispute, then the dispute shall be mediated. If mediation is unsuccessful, then the parties may exercise their rights at law.
- L. This Agreement is to be governed by the law of the state in which the Project is located.
- M. Engineer's Services and Additional Services do not include: (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission; (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances; (3) providing surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements; or (4) providing legal advice or representation.
- N. Engineer shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

6.01 *Total Agreement*

- A. This Agreement (including any expressly incorporated attachments), constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

7.1 *Definitions*

- A. *Constructor*—Any person or entity (not including the Engineer, its employees, agents, representatives, and consultants), performing or supporting construction activities relating to the Project, including but not limited to contractors, subcontractors, suppliers, Owner’s work forces, utility companies, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.

- B. *Constituent of Concern*—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner: Huerfano County

Engineer: KLJ Engineering LLC

DocuSigned by:
By: Gerald Cisneros
Print ID: 4C1B82CBDDEC4A6...
Title: Chairman, Board of County Commissioners
Date Signed: 2/1/2022

By: Mark Anderson
Print name: [] Mark Anderson
Title: [] Senior Vice President, EPW
Date Signed: [] 2/2/2022

Engineer License or Firm's Certificate No. (if required):

[]

State of: []

Address for Owner's receipt of notices:

Huerfano County
401 Main Street
Suite 201
Walsenburg, CO 81089

Address for Engineer's receipt of notices:

KLJ Engineering LLC
4585 Coleman Street
Bismarck ND 58503
Legal Notices to: legal@kljeng.com

EXHIBIT A

Scope of Services

For Huerfano River Bridge Rehabilitation project located on County Road 543, a 1/8 mile south of State Highway 69 on the east side of unincorporated Town of Gardner. The purpose of the project is to strengthen the existing bridge or replace with a new structure to remove weight restrictions.

Preliminary and Design Phases

Project Management

- Project Coordination
 - Setup ProjectWise account
- Meetings, Agendas, and Minutes
- Schedule and Budget Tracking
- Quality Control and Assurance
- Invoicing and Progress Reporting
- Assumptions
 - 2 meetings, Field Inspection Review (FIR) and Final Office Review (FOR)
 - PM and Roadway Engineer attend in person
 - Remaining staff attend virtually (Survey, Environmental, Hydraulics, Structures and, Geotechnical)
- Deliverables
 - Preliminary Phases
 - Agenda and Meeting Minutes
 - Schedule and Budget Updates
 - Invoices and Progress Reports
 - Design Phase
 - Agenda and Meeting Minutes
 - Schedule and Budget Updates
 - Invoices and Progress Reports
 - Draft Construction Contract Documents
 - Draft Bid Documents
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Public Involvement
 - Public Meetings

Survey

- Field Collection
 - Topographic survey
 - Apparent utilities, wetlands, waterways, and structures etc. as required
 - Hydraulic cross sections upstream and downstream as requested by hydraulics

- Right of Way (ROW)
 - Locate West Line of Section 19 T26S R69W monuments as per recorded Corner Records at centerline of roadway
 - Place no more than 3 Benchmarks within prescribed ROW for future construction
- Office Work and Coordination
 - Complete Form 1217, Preliminary Survey Request, ROW
 - Gather existing control information and published documents, from client or through research
 - Coordinate survey crew, survey data, and CAD survey mapping
 - Process data and drafting
 - Provide plat depicting found section corners for apparent prescriptive ROW centerline as well as calculated 30-foot line on either side of said located section line.
 - Plans – Survey Tabulation Sheets
- Assumptions
 - Site surveyed and mapped using the following survey system and units:
 - NAD83 Zone 503/NAVD88 – Horizontal/Vertical
 - US Survey Feet – Units
 - Waterway survey will be done during seasonal low flow
 - Control diagram plat established off tied sections
 - ROW is of prescriptive nature, through County Parcel numbers 160020, 23763, 42857, 17352, and T2619
 - ROW created by the County Commissioners (owner), all documentation regarding said order will be provided by the owner.
 - Acquisition of ROW not anticipated
 - Land Survey Control Diagram will be prepared in accordance with Section 2.4.11 CDOT ROW Manual and Chapter 5 CDOT Survey Manual, depicting the controlling centerline of assumed prescriptive ROW and calculated ROW for strip of land with total width of 60' (feet) with 30' (feet on either side of aforementioned section line.
 - Digital survey information, drawings, and files will be done using Microstation
- Deliverables
 - Preliminary Phase
 - Ownership list, old ROW plans and other available ROW information
 - Complete survey, including topography, utilities, and existing monumentation tied to CDOT survey control network
 - Accurate location of existing ROW based on found PLSS Monumentation
 - Plans - Preliminary Survey Tabulation sheet and survey needs as defined in RFP
 - Topographical base map
 - Design Phase
 - Benchmarks/control points within ROW (3-total)
 - Corner records for found section corners
 - Plans – Land survey control diagram
 - Plans – Survey Tabulation Sheet
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Aliquot section corners, ROW markers tied to CDOT's survey control network as required in RFP

- No monumentation for location of ROW lines will be established outside of RFP requirements unless specifically requested by owner. Requests by owner will be owner's responsibility to provide Right of Entry for each affected property and costs will be negotiated at time of request.
- Property Surveys
- ROW plats (KLJ's understanding is the existing easement/ROW is a presumed prescriptive easement/ROW)
- ROW monumentation outside of ROW
- Property Pin Location
- Right of Way Acquisitions
- Platting Services
- Boundary line dispute resolution.
- Drone photogrammetry by a licensed UAV pilot
 - Placing targets for UAV flight
 - UAV Flight
 - Aerial photos

Environmental

- Field Data Collection
 - A field wetland delineation will be completed in accordance with the USACE 1987 Wetlands Delineation Manual. A wetland delineation report will be submitted to the USACE with a request for jurisdictional determination of delineated wetlands.
 - A Class III cultural resource investigation will be completed in compliance with the Section 106 process. A cultural resource findings report will be submitted to the SHPO
- NEPA Documentation
 - Complete CDOT Form 128, NEPA Determination / Project Certification.
- Permitting
 - Prepare Documentation for Section 404 Nationwide Permit for Impacts to USACE Jurisdictional Wetlands.
- Assumptions
 - The field data collection will occur within an area of potential effect less than or equal to 2 acres.
 - Project Meets Definition of Programmatic Categorical Exclusion.
 - Wetland Impacts within Threshold for Nationwide Permit.
 - Wetland Mitigation - Purchase Credits at Approved Wetland Bank by the County.
- Deliverables
 - Preliminary Phase
 - CDOT Form 128, NEPA Determination / Project Certification
 - Identification of Wetland Mapping
 - Design Phase
 - Wetland Delineation Report
 - Cultural Resources Report
 - Section 404 nationwide permit
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Paleontological Survey
 - Public Involvement

- Any NEPA document other than a Categorical Exclusion
- Wetland Mitigation and/or monitoring plans
- Biological Assessment and/or Opinion
- An Individual USACE Section 404 permit
- Other permitting
- Tribal or agency consultation

Hydrology & Hydraulics

- Preliminary Phase
 - Hydraulic Reference Map
 - Gather information for the hydrologic and hydraulic analysis of existing and proposed conditions
 - Develop base map and base model conditions
 - Provide survey request/information
 - Develop hydraulic design requirements
 - Hydrology
 - Create & debug HEC RAS 1-D model
 - Develop two (2) alternative internal modeling iterations (e.g., one bridge and one box culvert)
 - Prepare preliminary Hydraulic Report
 - Quality Control Check
 - Interdisciplinary and team coordination
- Design Phase
 - Interdisciplinary and team coordination
 - Finalize Hydraulics Report
 - Final model, run, and verification
 - Final scour profile
 - Final exhibits
 - Final report
 - Quality control check
 - Plans – Bridge Hydraulic Information (2 sheets)
- Assumptions
 - No FEMA modeling available
 - Develop hydrologic basis for HEC-RAS 1-D hydraulic model
 - Build hydraulic model from scratch
 - Model using HEC RAS 1-D Model
 - Provide three (3) modeling alternatives per CDOT Drainage Manual
- Deliverables
 - Preliminary Phase
 - Preliminary Hydraulics Report
 - Scour analysis
 - 90% Final Model and Run
 - Exhibits
 - Design Phase
 - Submit permit items (e.g., no-rise cert.)
 - Final Hydraulics Report

- Plans - Bridge Hydraulic Information (2 sheets)
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Model parameters in GIS
 - HEC RAS 2D Modeling
 - Modeling more than two alternatives
 - Completion of permit forms
 - Permit Fees
 - FEMA Floodplain changes (e.g., LOMR, etc.)

Roadway

- Preliminary Phase
 - Define roadway functional classification
 - Define design controls and criteria
 - Prepare calculations, if necessary
 - Set horizontal alignment and vertical profile
 - Complete preliminary Design Data Form (CDOT Form 463)
 - Complete Justification of Design Exceptions (CDOT Form 464), if necessary
 - Prepare preliminary plans
 - Compute quantities
 - Prepare opinion of probable construction costs
 - Quality control check of design criteria, calculations, plans, quantities, and construction costs
- Design Phase
 - Address FIR comments
 - Prepare calculations
 - Prepare final plans
 - Prepare specifications
 - Compute quantities
 - Prepare opinion of probable construction costs
 - Quality control check of calculations, plans, specifications, quantities, and construction costs
- Assumptions
 - Traffic Data, Accident Data and Safety Report not Required
 - No utilities anticipated
- Deliverables
 - Preliminary Phase
 - Roadway typical section (existing and proposed)
 - Preliminary Design Data Form (CDOT Form 463)
 - Justification of Design Exceptions (CDOT Form 464)
 - Identification of detours and proposed construction phasing, if required
 - Existing utilities information, if applicable
 - Preliminary plans
 - Preliminary opinion of probable construction costs
 - Outline of specifications
 - Design Phase
 - Design Data Form 463

- Roadway plans
- Utilities memo (no impacts to utilities)
- Specifications
- Calculations
- Quantities
- Opinion of probable construction calculations
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Traffic Data, Accident Data and Safety Report
 - Stormwater Management Plans

Structures

- Preliminary Phase
 - Structure Data Selection
 - Determine Feasibility of Bridge Rehabilitation
 - Review Rating of Existing Superstructure Structural Elements and Feasibility of Repairs
 - Bridge Deck
 - Steel Beams
 - Review Existing Abutment Foundation
 - Structure Layout and Type Selection
 - Determine structure meets hydraulic requirements (Preliminary Hydraulics Report)
 - Determine rehabilitation type or structure type design alternatives
 - Rehabilitation – If feasible
 - Bridge rail, superstructure, and substructure
 - Replacement
 - Box Culvert, Concrete Bridge, and Steel Bridge
 - Foundation alternatives (Preliminary Geotechnical Report)
 - Review Bridge Rail Safety Options and Alternatives
 - Determine required Mash Level Bridge Rail
 - Determine feasibility of use of retired Bridge Railings (Type 3)
 - Compute preliminary quantities and estimates, Bridge Design Manual (BDM) Section 35
 - Evaluate structure alternatives per BDM criteria, Section 2
 - Prepare general layout and typical section of preferred alternative
 - Prepare Structure Selection Report
 - Quality Control Check of Plans, Specifications and Opinion of Probable Construction Cost
- Design Phase
 - Interdisciplinary Coordination
 - Revise Structure Selection Report incorporating FIR comments
 - Develop construction plans and specifications
 - Prepare quantities and independent quantity checks
 - Prepare opinion of probable construction costs
 - Quality control check of plans, specifications, and opinion of probable construction cost
 - Incorporate FOR review comments and revisions into plans, specifications, and quantities.
 - Prepare bid documents

- Assumptions
 - Existing structure load rating to be provided by Huerfano County
 - **STRUCTURAL DESIGN AND PLANS ARE FOR A CONCRETE BOX CULVERT**
 - **STANDARD CDOT CONCRETE BOX CULVERT, OR**
 - **PRECAST CONCRETE BOX CULVERT**
- Deliverables
 - Preliminary Phase
 - Preliminary quantities and opinion of probable construction costs
 - Plans – General Layout & Typical Section
 - Structure Selection Report
 - Design Phase
 - Design Calculations
 - Independent Design Calculations
 - Construction Plans
 - Specifications
 - Quantities and opinion of probable construction costs
 - Load rating
 - Field information package
 - Final Detail Letter – Consultant Final Submittal Certification
 - Inspection Sketches
- **Services Not Included (These services can be provided, upon request, at the KLJ Hourly Schedule that prevails at the time services are rendered).**
 - Existing Bridge Reinspection
 - Existing Pile Embedment Investigation
 - Load Rating Existing Structure
 - 3D Model Analysis of Existing Structure
 - Staging and Construction Engineering, falsework, shoring
 - **BRIDGE OR BRIDGE REHABILITATION DESIGN AND PLANS**

Geotechnical (Provided by Yeh & Associates)

- Field Investigation
 - Advance one boring at each abutment a nominal depth of 70 ft or 10 feet into bedrock, whichever is shallower
 - Boring locations will be marked in the field
 - GPS coordinates of boring locations will be located approximately with handheld GPS.
 - Field log will be prepared for each boring describing subsurface conditions
- Laboratory Testing
 - Samples will be classified in accordance with the Unified Soil Classification System
 - Anticipated tests
 - Water Content
 - Dry Unit Weight
 - Grain Size Distribution
 - Liquid and Plastic Limits
 - Unconfined Compression
 - Sulfates and Chlorides

- Engineering Evaluation Report includes the following information:
 - Plan of borings, boring logs, and laboratory test results
 - Description of the soil, bedrock, and groundwater conditions at the boring locations
 - Engineering geology sheets prepared in accordance with CDOT criteria
 - Foundation design recommendations in accordance with AASHTO design criteria, including nominal bearing resistance, applicable resistance parameters, suitable foundation types, approximate depth to bearing stratum, and estimated foundation movement
 - Below-grade wall design, including equivalent fluid pressures, drainage, and backfill recommendation
 - Site seismic design parameters
 - Earthwork, including site preparation, fill placement and compaction, and the suitability of the site soil for use as engineered fill
 - Construction considerations, such as hard rock excavation, construction dewatering, and drainage
- Assumptions
 - Borings will not be in roadway
 - Traffic control not required
 - Cobbles and boulders present includes advancing borings using ODEX drilling methods
 - Bedrock will be cored
- Deliverables
 - Preliminary Phase
 - Preliminary Geotechnical Report
 - Design Phase
 - Final Geotechnical Report

Bid Phase or Negotiating Phase

- Assemble Bid Documents (Construction Contract, Plans, and Specifications)
- Advertising
- Respond to Requests for Information (RFIs)
- Attend Pre-bid Conference
- Prepare Addenda (Clarify, Correct, or Change Documents)
- Provide Information or Assistance in Review of Proposals
- Review Qualifications of Proposers
- Attend Bid Opening, Prepare Bid Tabulations, Evaluate Bids
- Assemble Contracts and Issue Notice of Award

Construction Services Phase

- Construction Services are excluded from this contract

Deliverable Review Procedure

KLJ will upload one (1) electronic pdf file review copy of each of deliverable to CDOT's ProjectWise project folder for review by Huerfano County and other applicable agencies. Within 14 calendar days of receipt, Huerfano County shall submit to Engineer any comments regarding the furnished items.

KLJ will revise deliverables in response to Owner's comments, as appropriate, and upload 1 electronic pdf file of the revised deliverables to CDOT's ProjectWise project folder to the Owner within 7 calendar days of receipt of Owner's comments.

EXHIBIT B.2

KLJ Project Name:	HuerfanoRiverBridgeRehab
KLJ Project Number:	2103-01555

Task Code	Description	Job Classification:				DIRECT LABOR Subtotal	Expenses (person x days)	Reimbursable Rate	REIMBURSABLE EXPENSE ¹ Total	Subconsultant Bill	KLJ's % Markup Subconsultant's Name	Subconsultant Fee	Bal to: Lump Sum or Agreed Fee	TASK TOTAL
		Senior Project Manager	Engineer in Training II	Engineer	Project Manager									
1	Construction Phase Support	\$ 279.00	\$ 134.00	\$ 190.00	\$ 204.00		\$ 200.00							
	Project Management	16		8	8	\$ 7,616.00		\$ -			\$ -		\$ 7,616.00	
	On-Site Field Support	8	100		8	\$ 17,264.00		\$ -			\$ -	\$ (45.00)	\$ 17,219.00	
	Per Diem & Lodging (Estimated)					\$ -	10	\$ 2,000.00			\$ -		\$ 2,000.00	
		24	100	8	16	\$ 24,880.00	10	\$ 2,000.00		\$ -	\$ -	\$ (45.00)	\$ 26,835.00	

2	Sub-Consultant-Material Testing & Observations									2.0%			
	Yeh & Associates					\$ -		\$ -	\$ 61,550.00		\$ 62,781.00		\$ 62,781.00
						\$ -		\$ -	\$ 61,550.00		\$ 62,781.00	\$ -	\$ 62,781.00

		24	100	8	16	148	10						
						\$ 24,880.00		\$ 2,000.00			\$ 62,781.00	\$ (45.00)	\$ 89,616.00

¹ Includes Meals and Lodging : Used for planning purposes only.

² Includes equipment, rental/subscriptions, mileage... etc.

Reimbursable Notation:

Summary of Costs: Select a DOT

Direct Labor	\$ 24,880.00
	\$ -
Subtotal	\$ 24,880.00
On bill rate	\$ -
Raw labor cost	\$ -
Direct Expenses	\$ -
Subconsultants	\$ 62,781.00
Reimbursables	\$ 2,000.00
Balance to Lump Sum or Agreed Fee	\$ (45.00)
Total Estimated Engineering Costs	\$ 89,616.00

EXHIBIT C.2

December 17, 2024 (Revised February 13, 2025)

Mr. Ryan Sundberg and Mr. Dean Cooper
KLJ Engineering

Subject: Estimated Cost Proposal
Construction Testing Services
CR 543 Bridge Replacement over the Huerfano River
Huerfano County / Gardner, Colorado

Dear Mr. Sundberg and Mr. Cooper,

This estimated cost proposal presents Yeh and Associates, Inc. (Yeh) response for construction material testing as a part of the CR 543 Bridge Replacement over the Huerfano River. Subsequent conversions past Dec 17th have resulted in the addition of scope of work for inspection services as well.

Based on the project details of the needed materials testing and inspection for the CR 543 Bridge Replacement over the Huerfano River, it is our understanding that the project includes lab testing, soil density testing, asphalt testing, and concrete testing, as well as inspection of construction activities and materials incorporated into the site. The following presents our proposed scope of services, assumptions, and unit rates for the testing and inspection services for this approximate 6 month project.

Scope of Services

Based on our understanding of the project, the proposed scope of services includes the following:

1. Earthwork: Provide laboratory testing including proctor tests, gradation, LA Abrasion, sulfate, chloride, resistivity, PH, and soil classifications. As well as on-site in-place density tests on the subgrade, embankment material, structural backfill box culvert, structural back fill CMP, and aggregate base course. Estimated 28 days on site testing
2. Concrete: Provide laboratory testing including concrete and compressive strength testing to ensure design strength. Also perform on-site testing for air content, slump, temperature, and unit weight. Estimated 6 days on site testing and 6 short days picking up cylinders
3. Inspection and documentation of that inspection on CDOT's form 266 for construction activities and inspection of materials incorporated into the site. Inspections will occur as suggested in CDOT's construction manual. The tentative contractor's schedule was provided and a list was developed of the items/activities and occurrences of inspection was developed:
 - a. Measure topsoil stockpiled and complete 266 (1 day)
 - b. Culvert floor forming (last day) (1 day) and rebar placement (last day) (1 day) and complete 266(s)
 - c. concrete pour (1 day) field testing materials and pickup field cast cylinders (1 day)
 - d. Box wall(s) forming mid way and last day (2 days) and rebar placement (last day) (1 day)
 - e. Box lid forming (last day)(1 day) and rebar placement (last day)(1 day)

- f. Concrete pour (1 day) field testing materials and pick up field cast cylinders (1 day)
- g. Grout walls inspect before backfilling (1 day)
- h. Structure backfill material inspection and field testing (8 days)
- i. Embankment material inspect and field compaction testing (8 days)
- j. Class 6 base material inspect and field compaction testing (1 day each approach)(2 days)
- k. Pipe installation backfill material inspect and field compaction testing (2 days)
- l. Onsite walk through with PM generating punch list (1 day)
- m. Finals and closeout paperwork accomplished in office (2 days)
- n. Collection of soil materials requiring laboratory testing will be collected on days already on site for inspection activities.
- o. Due to drive time - time on site executing inspection and materials testing activities is assumed to be no more than 4-5 hours.
- p. If contractor production rates require more/less inspection days or if the PM requests inspection of more/less items than listed, the number of days onsite assumed here may adjust.
- q. All other activities not listed will be inspected by the PM and documented – or – items that can be paid at plan quantity (earthwork for example) will be documented by the PM.

Assumptions

Our proposed scope of services is based on the following assumptions:

1. The services will be provided as on-call basis depending on the contractor's schedule of work. A minimum of 24 hours notification is required to schedule on-site testing services.
2. Our estimate is based on the man-hours and equipment designed to meet the anticipated materials quantities and testing frequencies as provided for the project. If additional man-hours or equipment is required based on production, we will adjust our scope and fees accordingly.
3. Details of the estimated hours for our personnel and testing schedules may be found in the attached table.

Yeh will perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services will be performed. Therefore, no warranty or guarantee expressed or implied is part of the services offered by this proposal.

Cost of Services

The cost for our services, including all fieldwork, laboratory testing, and report preparation has been estimated on the basis of our standard unit rates attached to this proposal and will be billed based on a time-and-material basis. The actual cost will depend on amount of work required, contractor's schedule, contractor's methods (precast vs cast in place for example), delay due to weather, etc. Based on the anticipated quantities, we estimate a total of **\$61,550.00** for this project. The fee could be lower depending on workload and if there are scheduling efficiencies. We will not exceed this estimate without your authorization.

Services that are not included within this proposal will be billed at the rates provided in Yeh and Associates' most recent schedule in effect at the time of the request. The fees contained herein are valid for 90 calendar days from the date this proposal is submitted. After 90 days a review by Yeh may be required.

Authorization

We appreciate the opportunity of submitting this estimated cost proposal and are available to discuss the details. To authorize us to proceed with the proposed services, we anticipate a contract agreement will be provided by KLJ Engineering, and a mutual agreement will be achieved. A notice to proceed will be provided after the agreement is signed and executed.

Closing

We appreciate your consideration of Yeh and Associates, Inc. for this work and look forward to working as your geotechnical consultant on this and future projects. If we can be of further assistance, please contact us at 719-434-1643.

Respectfully Submitted,
YEH AND ASSOCIATES, INC.



Hansel Bjork
Project Manager



Joe DeHeart
Senior Project Manager

Attachments: Fee Schedule

ATTACHMENT A
CONSTRUCTION SERVICES COST ESTIMATE BREAKDOWN

Huerfano Bridge Replacement Estimated Cost Proposal	Estimated Quantity (Hours)	Unit Rate	Estimated Cost
Earthwork, Compaction Testing, Proof roll, Pipe Backfill (Embankment Material, Structural Backfill, Aggregate Basecourse)			
Const Obs I – obtain soils samples at pits for lab testing (Est 1 day@8 hrs/trip)	8	\$135/hr	\$1,080
Const Obs I - (embank 696 cy) (Est 8 days @ 8 hrs/trip) on site inspection & comp testing	64	\$135/hr	\$8,640
Const Obs I - (struc back 655 cy) (Est 8 days @ 8 hrs/trip) on site inspection & comp testing	64	\$135/hr	\$8,640
Const Obs I - (abc 563 cy) (Est 2 days @ 8 hrs/trip) on site inspection & comp testing	16	\$135/hr	\$2,160
Const Obs I - (pipe backfill) (Est 2 days @ 8 hrs/trip) on site inspection & comp testing	16	\$135/hr	\$2,160
Standard Proctor	2	\$220/ea	\$440
Modified Proctor	1	\$250/ea	\$250
Soil Classification	3	\$180/ea	\$540
LA Abrasion	1	\$300/ea	\$300
R-Value	1	\$400/ea	\$400
Soluble Sulfate	2	\$50/ea	\$100
Soluble Chlorides	2	\$50/ea	\$100
Resistivity of Soil	2	\$80/ea	\$160
PH of Soil	1	\$50/ea	\$50
Mileage 21 trips estimated 200 miles round trip	4200	\$0.70/mile	\$2,940
Subtotal			\$27,960
Concrete			
Const Obs I (Est 2 days at 8 hrs/trip) (floor-walls/top) air slump unit weight	16	\$135/hr	\$2,160
Cylinders (2 sets of (10) 4x8 cylinders)	20	\$25/ea	\$500
Cylinder Pickup (Est 2 trips at 8 hrs/trip)	16	\$135/hr	\$2,160
Compressive Strength of Cylinders	20	\$30/ea	\$600
Mileage 4 trips estimated 200 miles round trip	800	\$0.70/mile	\$560
Subtotal			\$5,980

Inspection			
Topsoil stockpile (Est 1 day at 8 hrs/trip)	8	\$135/hr	\$1,080
Culvert forming and rebar inspection (estimated 7 days at 8 hrs/trip)	56	\$135/hr	\$7,560
Walkthrough-punchlist (Est 1 day at 8 hrs/trip)	8	\$135/hr	\$1,080
Wall grout prior to backfill (Est 1 day at 8 hrs/trip)	8	\$135/hr	\$1,080
Mileage 10 trips estimated 200 miles round trip	2000	\$0.70/mile	\$1,400
Subtotal			\$12,200
Administration			
Lab Supervisor (Review Lab Results, develop reports)	8	\$155/hr	\$1,240
Construction Manager (Scheduling, Meetings, Report Review)(6 month 1 hr per week)	24	\$205/hr	\$4,920
Const Obs I – attend Weekly mting (6 months)	24	\$135/hr	\$3,240
Const Obs I – finals paperwork (5 days)	40	\$135/hr	\$5,400
Principle (Final Review, Stamped Letters)	4	\$240/hr	\$960
Subtotal			\$15,760
Estimated Project Total			\$61,900

Acceptance:

Electronic Delivery. This Agreement and any amendments hereto, to the extent signed and delivered by means of a facsimile machine or electronic mail (any such delivery, an "Electronic Delivery"), shall be treated in all manner and respects as an original contract and shall be considered to have the same binding legal effects as if it were the original signed version thereof delivered in person. At the request of any party hereto or to any such contract, each other party hereto shall re-execute original forms thereof and deliver them to all other parties.

IN WITNESS WHEREOF, the Client and **Yeh and Associates, Inc.** have executed this Agreement effective as of the date last written below.

EXECUTED BY Yeh and Associates, Inc:

EXECUTED BY CLIENT:

 YA's Authorized Representative signature

 Client's Authorized Representative signature

 Typed or Printed Name

 Typed or Printed Name

 Title

 Title

**COLORADO FRONT RANGE (Denver, Co Springs, Greeley)
STANDARD FEE SCHEDULE EFFECTIVE JANUARY 2025**

Professional Services:

<u>Classification</u>	<u>Basic Rate</u>
Principal	\$240/hr
Senior Project Manager	\$230/hr
Senior Project Specialist	\$215/hr
Project Manager	\$210/hr
Senior Project Engineer or Geologist	\$180/hr
Project Engineer or Geologist	\$155/hr
Staff Engineer or Geologist	\$140/hr
Engineer or Geologist Intern	\$90/hr
Resident Construction Engineer	\$225/hr
Construction Manager	\$205/hr
Construction Observer III	\$165/hr
Construction Observer II	\$150/hr
Construction Observer I	\$135/hr
Technician Leader or Supervisor	\$175/hr
Laboratory Supervisor	\$155/hr
Technician III	\$130/hr
Technician II	\$115/hr
Technician I	\$105/hr
CAD Designer	\$160/hr
CAD Technician	\$105/hr
Project Controller	\$170/hr
Administrative Assistant	\$105/hr

***Overtime rates for Construction Inspection, Technicians and Office Staff is 1.5 x rates shown.*

Laboratory tests are quoted on separate schedule or cost plus 10 percent for outside laboratory testing when applicable. Fees for expert witness preparation, testimony, court appearances, or depositions will be billed at the rate of \$350 per hour.

Rates do not include prevailing wage rates for field services. Prevailing wages will be determined on a project-by-project basis.

Other Direct Charges:

	<u>Rates</u>
Subcontracted services, copying and rented equipment	Cost Plus 10%
Travel, subsistence, and expenses	Cost Plus 10%
Vehicle	\$ 80/day
Automobile Mileage	\$ Current IRS Rate

LABORATORY RATE SCHEDULE - EFFECTIVE

JANUARY 2025

Classification – Index Tests:

Natural moisture content and Dry Unit Weight (ASTM D2216)	\$ 25
Moisture content – dry unit weight, drive, or core sample (ASTM D2937)	\$ 30
Moisture content – dry unit weight, chunk, or block sample	\$ 55
Moisture content – dry unit weight, thin-walled tube sample (ASTM D2937)	\$ 45
Atterberg limits with PL, PI, LL (ASTM D4318)	\$ 120
Specific gravity for coarse aggregate (AASHTO T85, ASTM C 127)	\$ 90
Specific gravity for fine aggregate (AASHTO T84, ASTM C 128)	\$ 105
Sand Equivalent (CP 30, AASHTO T 176)	\$ 110
Clay Lumps and friable particles in aggregate AASHTO T 112	\$ 150
Organic Impurities in fine aggregate for concrete ASTM C40.....	\$ 75
LA Abrasion test for aggregate smaller than ½" AASHTO T-96.....	\$ 290
Micro-Deval Abrasion.....	\$ 350
Grain size analysis (ASTM D422, 6913):	
a) Eight standard sieve nests to #200 (per ASTM D2487 or AASHTO M145)	\$ 90
b) Less than 3" max to #200 sieve with one split sieve	Add \$ 50
c) Percent less than #200 sieve with wash	\$ 55
d) Hydrometer analysis	Add \$ 200
Manual USC classification (ASTM D2488), extrude, examine, photo, and describe.	\$ 30
Soil classification (ASTM D2487/ AASHTO M145) sieve, #200 wash, Atterberg as required.....	\$ 200
Soil classification (ASTM D2487/ AASHTO M145) sieve, #200 wash, Atterberg as required (using a split gradation)	\$ 230

Moisture Density Relations:

Standard Proctor compaction (AASHTO T99, ASTM D698)	\$ 230
Oversize Correction (w/coarse aggregate specific gravity)	Add \$ 60
Modified Proctor compaction (AASHTO T180, ASTM D1557)	\$ 260
Proctor, One Point	\$ 75
Oversize Correction (w/coarse aggregate specific gravity)	Add \$ 60
R-value (ASTM D2844, AASHTO T190, Cal 301), untreated soil	\$ 400
California bearing ration (CBR) (AASHTO T193, ASTM D1883) single point with proctor test	\$ 450
California bearing ration (CBR) (, AASHTO T193, ASTM D1883) 3 points with proctor test	\$ 950
California bearing ration (CBR) (AASHTO T193, ASTM D1883) single point without proctor test	\$ 300
California bearing ration (CBR) (AASHTO T193, ASTM D1883) 3 points without proctor test	\$ 900

Corrosion Testing:

pH of soil or water AASHTO T289.....	\$ 50
Resistivity of soil or water, as received or saturated AASHTO T 288	\$ 80
Soluble sulfates AASHTO T 290	\$ 50
Soluble chlorides AASHTO T291.....	\$ 50

Swell / Collapse Testing:

Expansion index (ASTM D4829)	\$ 220
Swell-collapse (ASTM D4546-A)	\$ 220
Swell-collapse (ASTM D4546-B, C)	\$ 180
Soil unconfined compressive strength (ASTM D2166)	\$ 90

Pavement Tests:

Volumetric Production Sample Testing.....	\$ 600
Asphalt content	
a) Ignition furnace calibration, per mix	\$ 550
b) Calibration of nuclear asphalt gauge	\$ 550
c) % AC (CP L 5 1 2 0, AASHTO T 3 0 8)	\$ 120
d) Gradation from burn off (AASHTO T 30, ASTM D 5444)	\$ 120

- 2000 Clay Street, Suite 200, Denver, CO 80211, (303) 781-9590
- 627 Elkton Drive, Colorado Springs, CO 80907, (719) 434-1643
- 11520 21st Street, Unit 6, Greeley, CO 80634, (970) 451-5026
- 570 Turner Drive, Suite D, Durango, CO 81303, (970) 382-9590
- 1525 Blake Avenue, Glenwood Springs, CO 81601, (970) 384-1500
- 588 North Commercial Drive, Grand Junction, CO 81505, (970) 242-5125



Yeh and Associates, Inc.

Geotechnical • Geological • Construction Services

Maximum specific gravity (Rice) (CP 51, AASHTO T209)	\$ 120
Bulk specific gravity (AASHTO T166)	\$ 80
% Air Void (no rice included) CP L5115, and AASHTO T166.....	\$ 200
Moisture content for Hot Mix Asphalt (AASHTO T329)	\$ 40

Hveem Stability CP L 5106	\$ 220
Resistance of compacted asphalt mixture to moisture induced damage (Lottman) CP L 5109.....	\$ 570
Coring, per core	\$ 130
Marshall Compaction & Air Vids Analysis (ASTM 6926)	\$ 275
Marshall Stability & Flow (ASTM 6927)	\$ 175
Marshall Properties (3 specimens), ASTM D 6926 & D6927 include Rice, and Bulk SPG	\$ 450

Strength Tests:

Compressive Strength of Cylindrical Concrete Specimens (4" x 8") (AASHTO T 22 ASTM C39)	\$ 30
Compressive Strength of Cylindrical Concrete Specimens (4" x 8") (AASHTO T 22 ASTM C39)	\$ 50
Flexural Strength of Concrete Beam (Using simple beam with third-point loading) (ASTM C78)	\$ 100
Point Load Strength Index of Rock and Application to Rock Strength Classifications (ASTM D5731)	\$ 50
Mortar & Grout Cube Compressive Strength (ASTM C109) (per Cube)	\$ 50
Compressive strength for shotcrete cores including cutting and capping (per core)	\$ 100
Compressive strength for ship-in cylinders (made by others) (per cylinder)	\$ 50
Compressive Strength - Requiring extra work like stripping, cutting, and capping.....	\$ 100
Bulk density and Voids of Aggregate (ASTM C29, AASHTO T19)	\$ 150

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GENERAL CONDITIONS

INVOICES

Yeh and Associates, Inc. (Y&A) will submit progress invoices to client monthly and a final bill upon completion of the services. Invoices will show charges for different personnel and expense classifications. A more detailed separation of charges and backup data, such as timesheets and invoices, is available. Each invoice is due on presentation and is past-due thirty (30) days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1-1/2%) per month, or the maximum rate allowed by law, on past-due accounts.

SAMPLES

All samples of soil and rock will be discarded thirty (30) days after report submittal. Upon Client's written request and authorization, samples will be delivered in accordance with Client's instructions, or stored for an agreed charge.

RIGHT-OF-ENTRY

Unless otherwise agreed, Client will furnish right-of-entry for Y&A to make borings, surveys and/or explorations. Y&A will take reasonable precautions to reduce damage to property. However, it is understood by Client that in the normal course of work, some damage may occur.

UTILITIES

Y&A will request responsible utility owners to locate off-site lines. Client agrees to be solely responsible for designating the locations of all utility lines and subterranean structures within the property lines of the project. Y&A will not be liable for damage to subterranean structures (pipes, tanks, conduits, wires, etc.) which are not correctly located on or off the site.

JOB SITE

Client agrees that the construction contractor will be required by Client to assume sole and complete responsibility for job site conditions during construction of the project, including safety of persons and property. Client further agrees to indemnify and hold Y&A harmless from any and all liability in connection with the performance of work during construction of this project, excepting liability arising directly from the negligence of Y&A.

Client agrees that Y&A shall not be responsible for the construction contractor's means, methods, techniques, sequences or procedures, nor for the contractor's failure to construct the project in accordance with plans and specifications, applicable codes, and/or with generally accepted construction practices.

REPORTS

Reports, plans and other work prepared by Y&A remain the property of Y&A. Client agrees that all reports and other work furnished to the Client and his agents not paid for will be returned upon demand, and will not be used for licensing, permits, design and/or construction.

WARRANTY

Y&A agrees in connection with services performed under this Agreement that such services are performed with the care and skill ordinarily exercised by members of the profession practicing under similar conditions at the same time and in the same or similar locality. No warranty, expressed or implied, is made or intended by rendition of consulting services or by furnishing oral or written reports of the findings made.

Client recognizes that subsurface conditions beneath the project site may vary from those encountered in borings, surveys or explorations and that information and recommendations developed by Y&A are based solely on the information available to it. Any exploration, testing, surveys and analysis associated with the work will be performed by Y&A solely to fulfill the purpose of this Service Agreement and Y&A is not responsible for interpretation by others of the information developed.

RISK ALLOCATION

Y&A's potential liability to Client and others is seemingly disproportionate to Y&A's fee relative to the size, scope and value of the project. Therefore, unless Client and Y&A otherwise agree in writing in consideration for an increase in Y&A's fee, Client, including its directors, officers, partners, employees, agents, contractors and their respective assigns, agree to limit Y&A's total liability (whether arising from contract, statutory violation or tort) to \$50,000. This limitation shall apply to all phases of Services performed in connection with this Project whether subsequent to or prior to the execution of this agreement. In no event shall Y&A be liable for consequential, incidental or special damages.

DISPUTE RESOLUTION

In an effort to resolve any conflicts that arise during the design and construction of the Project or following the completion of the Project, the Client and the Consultant agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation.

INSURANCE:

The Consultant shall procure and maintain throughout the term of this Agreement the following insurance limits and coverage and shall, upon executing this Agreement, provide the Client a certificate(s) of insurance evidencing same, showing the Client as an Additional Insured on all coverage except worker' compensation and professional liability:

A. WORKERS' COMPENSATION Insurance in amounts required by state law including Employer's Liability Insurance with limits of not less than \$1,000,000 per accident, \$1,000,000 per disease and \$1,000,000 policy limit on disease.

B. COMMERCIAL GENERAL LIABILITY insurance including Bodily Injury, Property Damage, Personal Injury, Blanket Contractual and Broad Form Property Damage Coverage including Products and Completed Operations, and XCU exposure with combined single limits of not less than \$1,000,000 per occurrence.

C. COMMERCIAL AUTOMOBILE LIABILITY Insurance including owned, non-owned, leased and hired motor vehicle coverage with limits of not less than \$1,000,000 combined single limit per occurrence for bodily injury and property damage.

D. PROFESSIONAL LIABILITY Insurance with a limit of \$50,000 per claim or contract value whichever is greater.

BILLING RATE ADJUSTMENTS

Yeh reserves the right to adjust the standard fee schedule rates annually on January 1 of each calendar year by providing notice to the client of the updated fee schedule. Additionally, should the scope of work exceed the limitations of the current funding, Yeh shall submit a request for additional funding to ensure the completion of the contracted services.

Accepted by: _____
Date: _____