

**PROFESSIONAL SERVICES AGREEMENT – PROJECT 2019-010: LOWER MILLER CREEK
ROAD RECONSTRUCTION – LINDA VISTA BLVD TO BIG FORK ROAD ENGINEER
SERVICES**

THIS AGREEMENT is made and entered into this ____ day of _____, 2019, by and between the **CITY OF MISSOULA, MONTANA**, a municipal corporation organized and existing under the laws of the State of Montana, 435 Ryman, Missoula, MT. 59802, hereinafter referred to as “City,” and WGM Group, 1111 East Broadway, Missoula, MT. 59802 hereinafter referred to as “Consultant.”

In consideration of the mutual covenants and agreements herein contained, the receipt and sufficiency whereof being hereby acknowledged, the parties hereto agree as follows:

1. Purpose: City agrees to hire Consultant as an independent contractor to perform for City services described in the Scope of Services attached hereto as Exhibit “A” and by this reference made a part hereof.

2. Effective Date: This Agreement is effective upon the date of its execution.

3. Scope of Work: Consultant will perform the work and provide the services in accordance with the requirements of the Scope of Services (See Exhibit “A”).

4. Payment: City agrees to pay Consultant One Hundred Twenty Six Thousand Nine Hundred Twelve and 00/100 Dollars (\$126,912.00) for services performed pursuant to the Scope of Services. Any alteration or deviation from the described work that involves extra costs will be performed by Consultant after written request by the City, and will become an extra charge over and above the contract amount. The parties must agree upon any extra charges in writing.

5. Independent Contractor Status: The parties agree that Consultant is an independent contractor for purposes of this Agreement and is not to be considered an employee of the City for any purpose. Consultant is not subject to the terms and provisions of the City’s personnel policies handbook and may not be considered a City employee for workers’ compensation or any other purpose. Consultant is not authorized to represent the City or otherwise bind the City in any dealings between Consultant and any third parties.

Consultant shall comply with the applicable requirements of the Workers’ Compensation Act, Title 39, Chapter 71, MCA, and the Occupational Disease Act of Montana, Title 39, Chapter 71, MCA. Consultant shall maintain workers’ compensation coverage for all members and employees of Consultant’s business, except for those members who are exempted by law.

Consultant shall furnish the City with copies showing one of the following: (1) a binder for workers’ compensation coverage by an insurer licensed and authorized to provide workers’ compensation insurance in the State of Montana; or (2) proof of exemption from workers’ compensation granted by law for independent contractors.

6. Indemnity and Insurance: For other than professional services rendered, to the fullest extent permitted by law, Consultant agrees to defend, indemnify, and hold the City harmless against claims, demands, suits, damages, losses, and expenses connected therewith that may be asserted or claimed against, recovered from or suffered by the City by reason of any injury or loss, including but not limited to, personal injury, including bodily injury or death, property damage, occasioned by, growing out of, or in any way arising or resulting from any intentional or negligent act on the part of Consultant or Consultant’s agents or

employees.

For the professional services rendered, to the fullest extent permitted by law, Consultant agrees to indemnify and hold the City harmless against claims, demands, suits, damages, losses, and expenses, including reasonable defense attorney fees, to the extent caused by the negligence or willful misconduct of the Consultant or Consultant's agents or employees.

For this purpose, Consultant shall provide City with proof of Consultant's liability insurance issued by a reliable company or companies for personal injury and property damage in amounts not less than as follows:

- Workers' Compensation - statutory
- Employers' Liability - \$1,000,000 per occurrence; \$2,000,000 annual aggregate
- Commercial General Liability - \$1,000,000 per occurrence; \$2,000,000 annual aggregate
- Automobile Liability - \$1,000,000 property damage/bodily injury; \$2,000,000 annual aggregate
- Professional Liability - \$1,000,000 per claim; \$2,000,000 annual aggregate

The City shall be included or named as an additional or named insured on the Commercial General and Automobile Liability policies. The insurance must be in a form suitable to City.

7. Professional Service: Consultant agrees that all services and work performed hereunder will be accomplished in a professional manner.

8. Compliance with Laws: Consultant agrees to comply with all federal, state and local laws, ordinances, rules and regulations, including the safety rules, codes, and provisions of the Montana Safety Act in Title 50, Chapter 71, MCA. Consultant agrees to purchase a City business license.

9. Nondiscrimination: Consultant agrees that all hiring by Consultant of persons performing this Agreement will be on the basis of merit and qualification and will not discriminate on the basis of race, ancestry, color, physical or mental disability, religion, national origin, sex, age, marital or familial status, creed, ex-offender status, physical condition, political belief, public assistance status or sexual orientation, gender identity or expression, except where these criteria are reasonable bona fide occupational qualifications.

10. Default and Termination: If either party fails to comply with any condition of this Agreement at the time or in the manner provided for, the other party, at its option, may terminate this Agreement and be released from all obligations if the default is not cured within ten (10) days after written notice is provided to the defaulting party. Said notice shall set forth the items to be cured. Additionally, the non-defaulting party may bring suit for damages, specific performance, and any other remedy provided by law. These remedies are cumulative and not exclusive. Use of one remedy does not preclude use of the others. Notices shall be provided in writing and hand-delivered or mailed to the parties at the addresses set forth in the first paragraph of this Agreement.

11. Modification and Assignability: This document contains the entire agreement between the parties and no statements, promises or inducements made by either party or agents of either party, which are not contained in this written Agreement, may be considered valid or binding. This Agreement may not be enlarged, modified or altered except by written agreement signed by both parties hereto. The Consultant may not subcontract or assign Consultant's rights, including the right to compensation or duties arising hereunder, without the prior written consent of City. Any subcontractor or assignee will be bound by all of the terms and conditions of this Agreement.

12. Ownership and Publication of Materials: All reports, information, data, and other materials prepared by the Consultant pursuant to this Agreement are the property of the City. The City has the exclusive and unrestricted authority to release, publish or otherwise use, in whole or part, information relating thereto. Any re-use without written verification or adaptation by the Consultant for the specific purpose intended will be at the City's sole risk and without liability or legal exposure to the Consultant. No material produced in whole or in part under this Agreement may be copyrighted or patented in the United States or in any other country without the prior written approval of the City.

13. Liaison: City's designated liaison with Consultant is Monte Sipe and Consultant's designated liaison with City is Stephen McDaniel.

14. Applicability: This Agreement and any extensions hereof shall be governed and construed in accordance with the laws of the State of Montana.

IN WITNESS WHEREOF, the parties hereto have executed this instrument the day and year first above written.

CITY OF MISSOULA, MONTANA

WGM Group
CONSULTANT (Type Name Above)

By _____
John Engen, Mayor

By _____ [M1]
Print Name: _____
Print Title: _____

Attest:

By _____
Martha L. Rehbein C.M.C, City Clerk

APPROVED AS TO FORM

By _____
JIM NUGENT, City Attorney



September 11, 2019

Kevin Slovarp
CITY ENGINEER
City of Missoula
435 Ryman Street
Missoula, MT 59802

Re: Lower Miller Creek Road Reconstruction Project, Linda Vista Blvd. to Bigfork Road
City Project No. 2019-010 Road Design

Dear Kevin:

WGM Group, Inc. is pleased to be selected by the City of Missoula to provide professional services for the Lower Miller Creek Road Reconstruction Project. We understand this Project will include reconstructing Lower Miller Creek Road with curb/gutter, drainage structures, roadway section, bike lanes, and sidewalk on the south/east side of the road from Linda Vista Boulevard to Bigfork Road. Additionally, curb/gutter, drainage structures, and sidewalk will be included (as an alternative bid item) on the southeasterly side of the Lower Miller Creek Road from Bigfork Road to Jack Drive, as requested in the scoping meeting on May 20th, 2019. Lighting will be designed for the length of the Project, with the goal being to set the corridor up for continuous lighting, including the installation of conduits and wiring for future luminaires. However, this project will install luminaires only at the intersections of Linda Vista Boulevard, Old Bitterroot Road (the 90° bend in Lower Miller Creek Road), and Bigfork Road. This will be included as an alternate bid item to the eventual construction. Services for this project may include, but are not necessarily limited to, the following:

- Overall project management, including public involvement, coordination with regulatory agencies and private utilities, and preparation of permit applications.
- Surveying, preliminary engineering, and final design
- Preparation of easement exhibits, various presentation materials, newsletters, reports, construction drawings, and specifications.

This scope of work addresses professional services through design development, public involvement, and final design, of the Project. Preparation of construction documents, bidding assistance, and construction period services are not included. These services are anticipated to be addressed with an amendment as the project budget is refined throughout the design process. WGM Group proposes to utilize Tetra Tech, Inc. for Geotechnical Engineering, and HDR Engineers, Inc. for Electrical Engineering.

Phase 01: Project Management

WGM Group's project manager will actively manage and coordinate the project team and keep in regular contact with City staff via written and verbal communications. Invoices will be prepared monthly along with a report of project progress and budget tracking.

Phase 02: Public Involvement

WGM group will assist the City with limited public meeting involvement. This task includes two (2) public meetings; one following 30% design to allow input early in the design process, and a second meeting following 60% design to inform the public of the project impacts. We also anticipate meeting with stakeholders and landowners individually. With the length of this project, our scope assumes twenty-five (25) individual stakeholder/landowner meetings. These meeting are intended to provide a clear understanding of the project during design. The following is included:

- Prepare presentation graphics and materials.
- Host one (1) public meeting at the 30% design effort stage.
- Attend one (1) public hosted by the City of Missoula at the 60% design stage.
- Meet with stakeholders to review project impacts and potential mitigation.

Deliverable: Meeting materials; meeting notes, negotiations/conversations with stakeholders.

Phase 03: Right of Way Resolution & Topographic Survey

WGM Group will perform research, boundary control monument ties, right-of-way resolution and expand existing WGM Group horizontal control, vertical control, and field mapping. The following is included:

- Perform research for existing COS's, Plats, Deed Exhibits, Deeds, GLO record to help with right-of-way resolution of Lower Miller Creek Road from Linda Vista Boulevard to Bigfork Road, then on the southeasterly side of Lower Miller Creek Road from Bigfork Road to Jack Drive.
- Coordinate with the title company to obtain title information for approximately 30 parcels along the project area.
- Fieldwork to expand existing WGM Group horizontal and vertical survey control.
- Fieldwork to search and tie existing right-of-way monuments along the Project corridor.
- Resolve the right-of-way of Lower Miller Creek Road from Linda Vista Boulevard, then on the southeasterly side of Lower Miller Creek Road from Bigfork Road to Jack Drive using found monument ties and research.
- Underground utility locate coordination.
- Fieldwork to map improvements within 50' each side of Lower Miller Creek Road Centerline from Linda Vista Boulevard to Bigfork Road, then 50' on the southeasterly side of Lower Miller Creek Road Centerline from Bigfork Road to Jack Drive.
- Data processing and drafting of topographic sitemap (1-foot contour intervals).
- QA/QC by a Professional Land Surveyor.

Deliverable: Existing base map showing topographic and right-of-way information.

Phase 04: Geotechnical Analysis

WGM Group will work with Tetra Tech to provide a recommended road section, pavement treatment, and identify drainage solutions. The following is included:

- Tetra Tech design recommendations (see attached scope).
- Tetra Tech soil investigation (see attached scope).
- Tetra Tech geotechnical report (see attached scope).
- Provide Senior Engineer QA/QC

Deliverable: Geotechnical report summarizing geotechnical borings, analysis, road section, and pavement recommendations.

Phase 05: Electrical

WGM Group will work with HDR to provide a lighting layout and design. Lighting will be designed for the length of the Project, with the goal being to set the corridor up for continuous lighting in the future. To do this, it is assumed this project will install the necessary service(s), conduit and wiring for continuous lighting. However, luminaires will only be installed at the intersections of Linda Vista Boulevard, Old Bitterroot Road, and Bigfork Road. The following is included:

- Lighting layout. Our scope includes luminaire locations based on a calculated standard spacing for the selected luminaire. This will be based on industry standard lighting level calculations on the road surface for an urban collector street. A lighting contour map is not included in this scope.
- HDR electrical design (see attached scope).
- Provide Senior Engineer QA/QC

Deliverable: Future corridor lighting layout, intersection lighting layout, and service recommendations.

Phase 06: Design Development

This task will include a project kickoff meeting with the necessary City officials (City Engineering, Bike-Ped Board, Parks and Recreation, etc...) that will help drive the early design. The goal of this meeting is to increase the efficiency of design by reviewing the Project and its goals with multiple City agencies prior to initializing design efforts. Following this meeting WGM will identify the necessary design criteria, develop alignment options and identify areas that will require construction easements. WGM will submit a preliminary layout that represents a 30% layout for City review. This submittal will identify horizontal layout, drainage patterns, and an order of magnitude construction estimate. WGM will incorporate comments received during the 30% design review and develop a 60% design including a preliminary plan set identifying the preferred typical section, alignment, profile, lighting layout, and storm water treatment options. The following is included:

- Attend Project kickoff meeting
- Develop design criteria memo identifying the basic road design criteria and constraints as the basis for development of design.
- Identify road cross section and alignment alternatives.
- Identify areas requiring easements.
- Identify pedestrian crossings and improvements.

- 30% geometric layout that determines road width, curb, drainage, sidewalk, and an order of magnitude construction cost estimate.
- 60% design including a preliminary plan set identifying the preferred typical section, alignment, profile, lighting layout, storm water treatment options, and impacts to adjacent properties/utilities.
- Provide Senior Engineer QA/QC

Deliverable: Design criteria memo, 30% geometric layout and order of magnitude cost estimate, and 60% plan set identifying impacts to adjacent properties.

Phase 07: Final Design

WGM Group will prepare final designs for the project and submit Stage 3 to the City for Review. The following is included:

- Incorporate remaining preliminary design issues and changes based on 60% design review comments from the City and input from 2nd public meeting.
- Prepare draft easement documents and associated exhibits for permanent access easements. Our scope assumes three (3) access easement will be needed for the Project, and the City will file these.
- Finalize road section and pavement design recommendations.
- Prepare final typical street sections.
- Prepare final plan and profile sheets.
- Prepare final intersection grading and layout details.
- Prepare drainage details/plans for preferred storm drainage treatment option.
- Prepare miscellaneous details and standard details sheets.
- Prepare signing and striping plans.
- Prepare electrical lighting plans.
- Prepare cross sections.
- Prepare technical specifications, including standard special provisions.
- Prepare quantities and cost estimate.
- Provide Senior Engineer QA/QC review and oversight.

Deliverable: City of Missoula Stage 3 Submittal including plans, technical specifications, easement documents, and special provisions.

Additional Services

Services not specifically described in the tasks above are not included in this scope of work. Additional services may be added with a scope and budget amendment. Additional services may include:

- Additional alternatives, meetings, or deliverables, beyond those specified above.
- Preparation of construction documents, bidding assistance, and construction period services.
- Expansion of the project limits to include additional intersections or streets.
- Additional construction time, beyond the assumed construction duration.
- Change orders requiring additional engineering services.

Fee Estimate

Our fees will be billed on a time and materials basis with a total cost not to exceed \$126,912.00 without a supplemental agreement. Fees are valid through December 2020 and may need to be adjusted if the project extends beyond this date. A cost summary is provided below. A detail cost breakdown is attached.

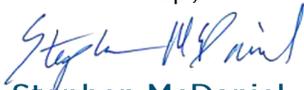
Cost Summary	
Phase 01: Project Management	\$ 10,248.00
Phase 02: Public Involvement	\$ 16,612.00
Phase 03: Surveying and ROW Resolution	\$ 21,000.00
Phase 04: Geotechnical Analysis	\$ 12,158.00
Phase 05: Electrical Design	\$ 22,924.00
Phase 06: Design Development	\$ 17,446.00
Phase 07: Final Design	\$ 26,524.00
Total	\$ 126,912.00

Schedule

We are prepared to begin work immediately upon receipt of a signed contract and propose completing work on the attached schedule.

Thank you for the opportunity to provide these services. We look forward to working with you. Please contact me at scmdaniel@wgmgroup.com or (406) 728-4611 if you have any questions.

Sincerely,
WGM Group, Inc.



Stephen McDaniel, P.E.
Project Manager

—
SMM:jljg

Encl.

Professional Services Estimate

Project Name: Lower Miller Creek Road Reconstruction Project

Project #: 190318

Client: City of Missoula

Date: 9/11/2019



DIRECT LABOR	Phase 01		Phase 02		Phase 03		Phase 04		Phase 05		Phase 06		Phase 07		TOTAL	
	PROJECT MANAGEMENT		PUBLIC INVOLVEMENT		SURVEYING SERVICES / ROW RESOLUTION		GEOTECHNICAL ANALYSIS (Tetra Tech)		ELECTRICAL (HDR)		DESIGN DEVELOPMENT		FINAL DESIGN		Hours	Total \$
	Hours	Total \$	Hours	Total \$	Hours	Total \$	Hours	Total \$	Hours	Total \$	Hours	Total \$	Hours	Total \$	Hours	Total \$
Principal Engineer	24	\$4,008	32	\$5,344			4	\$668	2	\$334	18	\$3,006	20	\$3,340	100	\$16,700
Sr Project Engineer					4	\$600									4	\$600
Sr Traffic Engineer									24	\$3,696			16	\$2,464	40	\$6,160
Project Engineer	48	\$6,240	60	\$7,800	4	\$520	8	\$1,040			62	\$8,060	56	\$7,280	238	\$30,940
Const Project Manager													18	\$2,556	18	\$2,556
Staff Engineer/EI									12	\$1,380	26	\$2,990	32	\$3,680	70	\$8,050
Landscape Architect 2			20	\$2,360									12	\$1,416	32	\$3,776
Landscape Architect 1													8	\$816	8	\$816
Sr Land Surveyor					5	\$770									5	\$770
Land Surveyor 3					22	\$3,124									22	\$3,124
Sr CADD Drafter					13	\$1,430			8	\$880	30	\$3,300	44	\$4,840	95	\$10,450
2-Person Crew					48	\$8,112									48	\$8,112
Project Assistant 2					3	\$285									3	\$285
Project Assistant 1			12	\$1,008											12	\$1,008
TOTAL LABOR	72	\$ 10,248	124	\$ 16,512	99	\$ 14,841	12	\$ 1,708	46	\$ 6,290	136	\$ 17,356	206	\$ 26,392	695	\$ 93,347

DIRECT EXPENSES	Phase 01	Phase 02	Phase 03	Phase 04	Phase 05	Phase 06	Phase 07	TOTAL
Sub-consultants	-	-	-	10,450.00	16,610.00	-	-	27,060.00
Mileage	-	100.00	60.00	-	-	-	-	160.00
Fees / Permits	-	-	4,500.00	-	-	-	-	4,500.00
Survey Equipment	-	-	1,560.00	-	-	-	-	1,560.00
Technology Fee	-	-	39.00	-	24.00	90.00	132.00	285.00
TOTAL DIRECT EXPENSES	\$ -	\$ 100.00	\$ 6,159.00	\$ 10,450.00	\$ 16,634.00	\$ 90.00	\$ 132.00	\$ 33,565.00

SUMMARY	Phase 01	Phase 02	Phase 03	Phase 04	Phase 05	Phase 06	Phase 07	TOTAL
Hours	72.0	124.0	99.0	12.0	46.0	136.0	206.0	695.0
Labor	\$ 10,248.00	\$ 16,512.00	\$ 14,841.00	\$ 1,708.00	\$ 6,290.00	\$ 17,356.00	\$ 26,392.00	\$ 93,347.00
Expenses	\$ -	\$ 100.00	\$ 6,159.00	\$ 10,450.00	\$ 16,634.00	\$ 90.00	\$ 132.00	\$ 33,565.00
TOTAL	\$ 10,248.00	\$ 16,612.00	\$ 21,000.00	\$ 12,158.00	\$ 22,924.00	\$ 17,446.00	\$ 26,524.00	\$ 126,912.00



September 10, 2019

Writer's Direct e-mail:
Lisa.fischer@hdrinc.com

Mark Bancale, P.E.
Project Manager
WGM Group
1111 East Broadway
Missoula, MT 59808

Re: 2019 – City of Missoula – Lower Miller Creek Road –Lighting Electrical Design

Dear Mark,

We have reviewed WGM's request for the electrical design of the roadway lighting for the Lower Miller Creek Road Reconstruction Project, which is a City of Missoula project.

The proposed scope of the project includes roadway reconstruction on Lower Miller Creek Road between Linda Vista Boulevard and Bigfork Road in Missoula, Montana. This reconstruction will include the installation of intersection lighting at these three Lower Miller Creek Road intersections:

1. Linda Vista Boulevard
2. Old Bitterroot Road
3. Bigfork Road

Conduit and pull boxes will also be installed for the future installation of roadway lighting along Lower Miller Creek Road between Linda Vista Boulevard and Bigfork Road. The future roadway lighting will consist of approximately 2,900 feet of roadway.

For the purpose of this estimate, it is assumed that the first phase will consist of three (3) intersections with lighting consisting of two decorative luminaires each, conduit and pull box installation from Linda Vista Boulevard to Bigfork Road in preparation of future lighting. It is also assumed one (1) new service will be required near Linda Vista Boulevard. The feasibility of using an existing service near Bigfork road will be reviewed, if the existing service is unusable, a second service will be required.

Our general electrical engineering scope of work for this project is outlined below:

- Discuss site with WGM as needed. (Up to 2 hours total).



- Up to two design site visits are anticipated by HDR.
- Develop red-line plan sheets for initial and future electrical work with detail drawings per the City of Missoula's lighting requirements.
- Provide red-line plan details of street light pole wiring diagrams with watertight connector schedules, conduit and wire schedules, and material tabulation schedule for initial and future electrical work per the City of Missoula's lighting requirements.
- Provide red-line plan details of utility service, including meter, disconnect, panel, and lighting controls. HDR will provide drafting for service one-line diagrams.
- Calculate voltage drops and conduit fills for specified wire sizes.
- Edit special provisions for lighting specifications.
- Coordinate with NorthWestern Energy for the installation of the new electrical service(s).
- HDR to coordinate with WGM on pull box and conduit locations. WGM will provide locations of future luminaire poles to facilitate the appropriate locating of the pull boxes and conduit.

Our scope and fee does not include the following:

- Project drafting (completed by WGM), except for the service one-line diagrams and wiring details which HDR will complete in AutoCAD or MicroStation format.
- Coordination meetings with City of Missoula for luminaire selection. Decorative LED luminaires that were previously chosen by the City of Missoula will be used for this project, WGM and City of Missoula to coordinate style of decorative luminaire.
- Spotting of the luminaire poles. WGM will provide required spacing and locations of luminaires based on lighting level calculations and spot poles accordingly to reduce/eliminate conflicts with utilities and future infrastructure improvement as well as to provide the pole and luminaire schedules.
- Coordination with NorthWestern Energy for the adjustment or relocation of distribution or transmission lines for clearance for luminaire pole locations and installation.
- Construction engineering services.
- Bid administration services.

Our final deliverables to WGM for design engineering will be a set of red-lined plans, voltage drop calculations, conduit fill calculations, service panel plans, service one-line



wiring diagrams, cost estimate (based on material quantities), and edited special provisions. Additional lighting, traffic signals, or electrical connections (such as landscape irrigation, etc.) will require an amendment to this scope and fee.

Our engineering fee proposal based on the scope of work outlined in this letter is \$15,100. This fee reflects our current labor rate with multiplier, rates.

Please let us know if you find our proposal acceptable. We are looking forward to working with you and your staff on this project.

Sincerely,

HDR ENGINEERING, INC.

Sincerely,
HDR Engineering, Inc.

A handwritten signature in blue ink that reads "Lisa Fischer".

Lisa Fischer, PE
Project Manager

A handwritten signature in black ink that reads "Jared R. Harris".

Jared Harris, PE
Vice President



TETRA TECH, INC.

September 10 , 2019

Mr. Stephen McDaniel, PE
WGM Group
1111 East Broadway
Missoula, Montana 59802

SUBJECT: Proposal for Lower Miller Creek Road
Roadway Rehabilitation
Missoula, Montana

Dear Mr. McDaniel,

Tetra Tech is pleased to submit this proposal to provide geotechnical engineering services for the roadway rehabilitation project in Missoula, Montana. This proposal is in response to your request, and outlines our understanding of the project, our proposed scope of work, and the estimated cost and time schedule for completion of the project.

Project Description

The project will consist of rehabilitation of Lower Miller Creek Road, extending approximately 0.5 miles from Linda Vista Drive to Bigfork Road. The rehabilitation could include; milling and filling, full-depth reclamation, overlay, and minor widening,

Site Location and Anticipated Subsurface Conditions

Based on our previous geotechnical investigations performed in the area, we assume the subsoils could consist of silt and clay overlying sand and gravel. We anticipate that groundwater could be encountered at a shallow depth.

It is our understanding that the site is accessible by our truck-mounted drilling equipment. Tetra Tech will subcontract traffic control and appropriate signing as necessary.

Tetra Tech personnel will request locates of underground water, sewer, power, and gas lines by the appropriate public utilities 48 hours prior to drilling. If the utility companies adhere to schedule, 48 hours advance notice should be sufficient for completion of this service.

Scope of Services

The purpose of this study is to obtain roadway and pavement section and subgrade parameters for use in designing pavement rehabilitation alternatives. Properties obtained will include; general condition of existing pavement layer, thicknesses of the pavement layers, strength properties of the base course, subbase, if present, and subgrade layers. Design recommendations will include; roadway and pavement rehabilitation alternatives, recommended roadway section and pavement alternatives, subgrade preparation recommendations, full-depth reclamation recommendations if applicable.



The field portion of our investigation will include drilling four borings along the roadway alignment to depths on the order of 10 feet. Standard penetration resistance tests will be made and undisturbed samples obtained as the drilling progresses. Groundwater, if encountered at the time of our investigation, will be observed and the depth reported. A field engineer will supervise the field investigation, log the test borings and select sample locations.

Samples will be analyzed in Tetra Tech's laboratory to determine the appropriate physical and engineering properties, including; natural moisture content, gradation analyses, Atterberg limits, sulfate content, pH and resistivity, moisture-density determination, and CBR.

Tetra Tech will complete a report, including; summary of our investigation with geotechnical logs, lab data, and pavement rehabilitation recommendations. We have also assumed that we will provide a red-line review of the project plans prior to submitting for bid. Services will be performed in accordance with generally accepted standards of the geotechnical engineering profession.

Cost Estimate

Our fee for the geotechnical investigation, including four test borings, laboratory testing, and the report as outlined above, will be on a Time-and-Materials basis not to exceed \$9,500.00, which includes an estimated \$1,500.00 traffic control cost. The cost breakdown for drilling, lab testing, and reporting is shown on the attached spreadsheet. Should additional borings be requested or necessary, the cost per boring, including drilling and field engineer's time will be \$500.00 to a depth of 10 feet. We will not exceed these fees for the scope of work items presented above without prior written authorization.

Schedule

Drilling can be scheduled within one to two weeks of notice to proceed. Laboratory testing will require approximately two weeks. A geotechnical report will be submitted approximately 2 weeks following laboratory testing. We can provide preliminary recommendations prior to submittal of the written report.

Thank you for the opportunity to submit this proposal, and we look forward to working with you on this project. If you have any questions, please contact me at (406) 543-3045.

Respectfully submitted,
TETRA TECH

Marco Fellin, P.E.
Project Geotechnical Engineer