

September 26, 2022



Ed Cannon, Town Manager
Joe Fuqua, Interim Public Works Director
Town of Fraser
153 Fraser Avenue, PO Box 370
Fraser, Colorado 80442
Via email: ecannon@town.fraser.co.us, jfuqua@town.fraser.co.us

Subject: Request for Contract Amendment

Dear Ed and Joe:

Merrick has been working diligently to complete the design of an upgrade to an existing sewer line that extends from Manhole B010 on the east side of US Highway 40 beneath the highway and Union Pacific Railroad (UPRR) to Manhole W012 on the west side of the UPRR right-of-way (ROW).

This letter is to share information about how some scope items are impacting the budget compared to what was anticipated in the proposed scope of work and fee. Table 1 identifies the scope of work items and budgets as identified in the letter proposals.

Table 1 – Letter Proposals for Sewer Upgrade and Crossing Project		
Item	Scope of Work	Amount, \$
Letter proposal 8/31/2021	Permitting Services, Sewer Main Expansion	\$12,000
Letter proposal 2/17/2022	Sewer Upgrade Design	\$69,317
Total		\$81,317

As of today's date, Merrick is 71% spent overall and 94% spent for the design services portion of the project. The purpose of this letter is to request a contract amendment due to additional work in some scope items. The additional work was not anticipated in the proposed scope of work and fee. The total amount requested is \$29,850. Table 2 describes the scope of work elements with amount of effort expended and or anticipated. A detailed description of the activities follows the table.

Table 2 – Requested Contract Amendment		
Item	Scope of Work	Amount, \$
Value Engineering for UPRR Bore	Communication with UPRR to revise permit Investigations on bore methods Additional design discussions about bore Revise specifications to include BT Construction to provide Geonex air hammer at a fixed cost for all potential bidders Reapply to UPRR for the permit	\$13,915
Title Work for Adjacent Properties	Subcontract with HC Peck for Title Work Survey Work Drafting and Development of Legal Descriptions	\$15,935
Total		\$29,850

Employee Owned

2480 W. 26th Street, Unit B225
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Value Engineering for Bore Under UPRR. Merrick submitted a figure and application to UPRR in early 2022 and obtained a Pipeline Crossing Agreement in April. The agreement required execution and payment to UPRR to be made no later than August 2022. The preliminary design basis in the application was developed with the best information available at the time and identified a 48-inch diameter casing under the railroad.

In follow-up conversations with UPRR, it was discovered that making changes to design and construction details submitted within the initial application are not feasible. It is also not possible to request a time extension to pay and execute the agreement. Merrick and the Town did not contemplate the need to revise the UPRR initial permit or to investigate different bore methods.

There are two important considerations surrounding the bore under UPRR. The first consideration is the cost of a 48-inch diameter casing. A 48-inch diameter casing was recommended by a reputable geotechnical firm as an initial, conservative -size casing to allow for anticipated subsurface conditions. As the design progressed Merrick investigated decreasing the size of the casing pipe to save money. Investigations involved contacting boring companies to discuss their experience in completing bores in the Fraser area, different boring methods, and possible complications due to the presence of cobbles.

The second consideration is reports of the experience using a non-guided augur bore, by a developer's contractor, at two different locations in Fraser. The augur hit cobbles and veered off course resulting in the need to re-align the sewer pipe inside the casing and add an alignment manhole. For gravity sewer pipe, re-alignment is not always possible, especially in a smaller casing.

For these two considerations, Merrick invested effort to bring the Town more information about different bore methods to reduce the risk of misaligning the casement while saving money on the size of the casement. After our conversation with BT Construction, Inc. (BT) it is recommended that the bid design be modified to show a 24-inch diameter casing installed by the Geonex air hammer method. BT shall provide a fixed price and be included in the Bid Form with the intent that all potential bidders subcontract with BT.

It was decided to let the initial UPRR permit expire and obtain a new permit once the casing size and bore method were decided. A new initial permit application will be required at a cost of \$755, which is included in Merrick's request. The cost to execute the final permit is anticipated to be \$9,500 and is not included in Merrick's scope of work or this request.

Title Work for Adjacent Properties. The 60% design identified nine properties adjacent to the proposed sewer alignment that appear to be private property with no easement identified. At the weekly progress meeting it was discussed that improved knowledge or property ownership was desired. It was also discussed that of the nine properties, three were the most important to research. Investigating property ownership was not included in Merrick's original scope of work.

Merrick requested and received a proposal from H.C. Peck & Associates, Inc. to obtain title information on these properties. Merrick will subcontract with H.C. Peck to complete title work on the three properties. Along with survey, to be performed by the Merrick Survey Group, drafting, and developing legal descriptions, the total cost to obtain title work on three properties is \$15,935. Please note, this work does not include negotiating the easements with property owners, valuing the land, or paying property owners for the easement(s). As this time, not enough information is known about the anticipated easement(s) to put a scope of work and fee in place.

Proposed Resolution. These project activities represent reasonable efforts undertaken to address issues as more information became available during the design phase with the goal of meeting the Town's requests and reducing risk during construction.

Merrick proposes two options to address the cost of the expanded and additional scope items.

- 1) Approve a contract amendment in the amount of \$29,850.

- 2) Authorize Merrick to spend the \$19,787 that was scoped to be used for construction administration services and instead, used to complete the design and bid phases and approve a contract amendment in the amount of \$10,063.

Attached to this letter request are the two letter proposals as back up documents to provide a stand-alone package of the contract agreements and a Change Order Request No. 1 form. If the Town is in agreement with the change request, please sign and date the Change Order Request No. 1 form and return a copy to Merrick. Please call or email me at 303-353-3359 or julie.koehler@merrick.com with questions or comments. Thank you for the opportunity to serve the Town of Fraser.

Sincerely,



Julie Koehler
Sr. Project Manager

Attachments:

Letter Proposal dated August 31, 2021 for Permitting Services, Sewer Main Expansion, Fraser, Colorado
Letter Proposal dated February 17, 2022 for Sewer Upgrade Design
Change Order Request fee estimate
Change Order No. 1



August 31, 2021

Adam Cwiklin, CWP
Water and Wastewater Superintendent
Town of Fraser
153 Fraser Avenue, PO Box 370
Fraser CO, 80442
Via email: acwiklin@town.fraser.co.us

RE: Proposal for Permitting Services, Sewer Main Expansion, Fraser Colorado

Dear Adam:

Merrick & Company (Merrick) is pleased to present this proposal to complete early permitting activities for an upgraded sewer main extending under Highway 40 and the Union Pacific Railroad (UPRR), tracks in Fraser. Work crossing railroad rights-of-way will require a permit from the UPRR which has historically required significant time to complete, typically ranging from six months to almost a year. Due to this extended time, we propose to start the permitting process so that the sewer upgrades may be completed in the next year.

Note that this work includes upsizing the sewers from manhole W012 to manhole B010. It does not include upsizing the sewer in Leonard Lane.

We propose to complete the following activities:

- Conduct preliminary conversations with UPRR and the Colorado Department of Transportation (CDOT) to determine any special permit requirements for this location.
- Verify the preliminary sizing calculations for the loading on this sewer based on future projections that were developed as part of the Wastewater Collection System Master Plan.
- Prepare a preliminary layout for the sewer upgrades, including new manholes. It is assumed that construction of a parallel sewer would be most cost effective if determined practical.
- Propose preliminary means of construction, including open cut and boring methods. Boring methods will be based on assumed geotechnical conditions and consultation with a boring specialist to determine potential surface impacts to the highway and railroad.
- Utilize the information above to determine whether the current sewer right-of-way is sufficient for any necessary realignment or if additional or temporary rights-of-way may be necessary for construction.

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- File permit applications with UPRR and CDOT.
- Meet with you throughout this design process to ensure that our preliminary design meets your expectations and the Town's needs.
- Prepare a summary letter report including the status of permits and rights-of-way. Preliminary design drawings including simplified plan-and-profile sheets will be included in this report.

Assumptions

We have assumed a reasonable effort to address our understanding of permitting requirements for the new sewer main. Our total estimated fee of \$12,000 is based on an hourly rate plus expenses basis in accordance with our current rate schedule. Permit application fees are not included in our estimate. Please contact us if you have any questions or concerns regarding these proposed services.

Sincerely,
Merrick and Company



Randy Kenyon, P.E.
Project Manager



Terry Kenyon, P.E.
Principal/Senior Project Manager



February 17, 2022

Adam Cwiklin, CWP
Water and Wastewater Superintendent
Town of Fraser
153 Fraser Avenue, PO Box 370
Fraser CO, 80442
Via email: acwiklin@town.fraser.co.us

RE: Proposal for a Sewer Upgrade Design, Fraser Colorado

Dear Adam:

Merrick & Company (Merrick) is pleased to present this proposal to complete the design of an upgrade to an existing sewer line that extends from manhole B010 on the east side of US Highway 40, beneath the highway and Union Pacific Railroad (UP) to manhole WO-12 on the west side of the UP right-of-way (ROW). The existing 8-inch sewer line is undersized to meet future demands and will be replaced with 10-inch and 12-inch lines.

Because the existing sewer line crosses beneath active railroad tracks and Highway 40, bypass pumping to replace the line in the same alignment would be impractical. Consequently, the new line will be designed in parallel with the existing line to keep the existing line in service through construction.

In December 2021, Merrick completed a single sheet conceptual plan-and-profile of the new sewer line which the Town utilized to initiate a permit request with UP for a new crossing under their ROW. This plan-and-profile will be a starting point to complete the design of the new sewer line, and the final design will be used to update the UP permit request, and to start a new request with the Colorado Department of Transportation (CDOT) for the crossing under Highway 40.

Scope of Services

Work would begin upon authorization from the Town. We will schedule a kickoff meeting with the Town (virtual or conference call) to confirm the project scope and key tasks and ensure everyone has the same understanding of the project and its deliverables. We will confer with the Town regarding any additional information that may be available since the conceptual design was completed including updated surveys and right-of-way filings.

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Final Design Phase

Final design will include preparation of construction plans and specifications that conform to Town of Fraser and industry standards and includes preparation of contract documents necessary for competitive bidding.

Specific tasks include:

1. Geotechnical services: we propose to subcontract geotechnical services including mobilizing a drill rig with large rock capabilities for two borings, observing two test pits, collecting soil samples for laboratory testing, and preparation of a separate report of soil and groundwater conditions pertaining to horizontal borings.
2. Prepare all necessary design calculations, designs, final drawings, and specifications as are reasonably needed to advertise and obtain competitive construction bids.
3. Complete site visits and field observations as needed for design.
4. Provide coordination for obtaining utility locates.
5. Submit progress drawings at approximate 60% and 95% design level.
6. Prepare and furnish copies of drawings, details, specifications, and other contract documents for final review by the Town.
7. Assist the Town in completing permits for the new sewer line construction under UP and Highway 40 ROWs, including any necessary construction easements. We will meet with the Colorado Department of Transportation to discuss the potential for less expensive open cut construction in the Highway 40 ROW.
8. Prepare basic documents related to construction contracts for review and approval by the Town. These may include contract agreement forms, instructions to bidders, general conditions and project special provisions, and advertisement for bids.
9. Prepare a final Engineer's opinion of construction costs.
10. Assist in advertising and securing bids, tabulation and analysis of bid results.
11. Furnish recommendations on the award of construction contracts.

Construction Phase

This work will include engineering related services as required to assist the Town to ensure the project is constructed in conformance with the approved plans and specifications, and Town criteria. We understand the Town may provide daily inspection and overall on-site construction management. Merrick will provide assistance for only those services so directed by the Town. In an effort to provide continuity we would propose that our construction manager, Eric Vaughan, manage our internal resources to meet the Town's inspection needs and schedules. Services could be provided in conformance with our existing Construction Management and Inspection Services contract. Specific tasks include:

1. Conduct an on-site preconstruction meeting with the Contractor.
2. Complete site visits to observe construction progress and quality. We have assumed a visit every other week for 12 weeks, plus two additional visits for a pre-construction meeting and



final inspection, for a total of 8 visits. As much as possible, site visits will be coordinated with other inspection services by Eric Vaughan to reduce travel and be cost effective.

3. Check construction and shop drawings submitted by the Contractor for compliance with design concepts.
4. Review and respond to requests for information (RFIs).
5. Review and make recommendations on Contractor pay applications.
6. Support the Town in contract closeout by inspecting the project to recommend for or against meeting substantial completion, preparing a punch list, and inspecting the project to recommend for or against meeting final completion.

Assumptions

We have assumed that the information to be collected is available from existing sources and does not require research to create new data.

1. Surveying is not included in this scope as we understand that the Town prefers to directly contract these services. Merrick will provide coordination for these services and has requested a proposal on the Town's behalf from Core Consultants to survey the site vicinity, and to survey utility locations and depths. Core will subcontract potholing services as needed to confirm utility depths.
2. Merrick will coordinate with the Town for utility locates.
3. The Town will supply an excavator and operator to dig test pits.
4. The Town will work with adjacent property owners regarding the possible need for easement acquisition.
5. Costs for permits and easements are not included in our fee.
6. Our fee includes \$11,530 in subcontracted geotechnical services detailed in the attached proposal from CTL Thompson. The proposal from CTL Thompson included \$1,320 in costs for an excavator which will not be necessary because the Town will supply the excavator.



Schedule

We are prepared to start immediately upon your authorization and anticipate that the schedule for design completion will be as follows, based on a notice to proceed received on March 7, 2022 after the March 2, 2022 Town of Fraser Board of Trustees meeting.

Description	Anticipated Date
Kick Off Meeting	Week of March 7, 2022
Meet with CDOT	Week of March 21, 2022
Coordinate Geotechnical Investigations and Surveys. Coordinate Utility Locates. Meet with the Town in Person.	Week of May 2, 2022
Submit 30% Progress Drawings for Town Review	Week of May 9, 2022
Completion of Geotechnical Report and Survey Results	Week of May 16, 2022
Submit 60% Progress Drawings, Details, and Specifications for Town Review. Initiate CDOT Permit.	Week of June 13, 2022
Submit 95% Progress Drawings, Details, Specifications and Contract Documents for Town Review	Week of July 18, 2022
Submit Final Drawings, Details, Specifications, Contract Documents, Instructions to Bidders and Advertisement for Bids. Assist Town with Advertising for Bids	Week of August 15, 2022

We will also assist with bid tabulation, bid analysis and recommendations for award based on the Town's advertisement and bid schedule.

Fee

The Engineering services required, as described above, will be furnished on an hourly rate plus actual expense basis using the current Schedule of Hourly Rates.

- Geotechnical Services: \$11,530
- Engineering: \$38,000
- Construction Administration: \$19,787
- Total: \$69,317



Please contact me if you have any questions or concerns regarding these proposed services.

Sincerely,
Merrick and Company

Randy Kenyon

Randy Kenyon, P.E.
Senior Project Manager

The above proposal is accepted by the Town of Fraser, and the Engineer is authorized to proceed with the work.

By: *Adam Cwiklin* Date: *3-18-22*

Adam Cwiklin
Town of Fraser
Water and Wastewater Superintendent





**Proposed Fee
Request for Contract Amendment**

Project No.: (65420492-03)
Sheet: 1 of 1
By: JBK Checked:
Date: 09/23/2022 Date:

Task Description	Project Manager (Koehler/ Frisch)	Senior Civil Engineer (Steed)	2-man crew (survey)	Drafting / COP & Data (Sloan/ Eldridge)	Total Hours	Labor (\$)	Sub- contracts	Direct Costs (Mileage and Misc.)	Total
	\$230.00	\$180.00	\$170.00	\$135.00					
Tasks									
1 VE for Bore Under UPRR									
1.1 Communication with UPRR to revise the permit by email and phone		4			4	\$720			\$720
1.2 Investigations on different bore methods		8			8	\$1,440			\$1,440
1.3 Additional design discussion, adjustments to drawings and specifications, and contract documents to sole-source BT Construction	2	24		24	50	\$8,020			\$8,020
1.4 Reapply for UPRR permit ¹	2	8		8	18	\$2,980		\$755	\$3,735
Subtotal VE for Bore					80	\$13,160		\$755	\$13,915
2 Title Work for Adjacent Properties									
2.1 Title Search ²	1	4			5	\$950	\$2,700		\$3,650
2.2 Survey Work ³		4	12	4	20	\$3,300		\$90	\$3,390
2.3 Drafting	1	4		15	20	\$2,975			\$2,975
2.4 Develop Legal Description(s) ⁴⁵	5	4		30	39	\$5,920			\$5,920
Subtotal for Title Work					84	\$13,145	\$2,700	\$90	\$15,935
Total Hours =	11	60	12	81	164				
Total Change Order Requested=						\$26,305	\$2,700	\$845	\$29,850

Notes:

1. UPRR application fee, \$755. Execution fee of \$9,500 not included in Merrick's fee. Town of Fraser to pay UPRR directly.
2. Subcontract to HC Peck administered by Merrick (3 parcels at \$900 each)
3. Survey - Merrick survey team to return to Fraser to locate section corners or property corners based on title work
4. Assumptions - easement not developed by the plat at Crooked Creek. Anticipated to require two permanent easements and two temporary construction easements at Ace Hardward boundary and Crooked Creek boundary.
5. Once title work is complete, it is assumed that a ROW agent will be engaged to negotiate with property owners, value the land, and pay property owners for the easement(s). ROW agent fees not included.
6. No construction phase work is included in this request. Merrick will provide a scope of services and fee estimate following bidding phase services.

CHANGE ORDER NO.: 1

Owner: Town of Fraser
 Engineer: Merrick & Company
 Contractor:
 Project: Sewer Upgrade and Crossing Hwy 40 and UPRR
 Contract Name: Sewer Upgrade Design
 Date Issued: 3/18/2022
 Owner's Project No.:
 Engineer's Project No.: 65420492-03
 Contractor's Project No.:
 Effective Date of Change Order: 9/23/2022

The Contract is modified as follows upon execution of this Change Order:

Description:

Merrick requests Town of Fraser to approve spending \$19,787 originally contracted for construction administration to complete the design and bidding phase and to execute this Change Order No. 1 in the amount of \$10,063 bringing the design and bid phase contract total to \$91,380.

Attachments:

Letter Proposal dated August 31, 2021 for Permitting Services, Sewer Main Expansion, Fraser, Colorado

Letter Proposal dated February 17, 2022 for Sewer Upgrade Design

Letter Request for Contract Amendment dated September 19, 2022

Change in Contract Price	Change in Contract Times [State Contract Times as either a specific date or a number of days]
Original Contract Price: \$ <u>12,000</u>	Original Contract Times: Substantial Completion: <u>Not specified</u> Ready for final payment: <u>Not specified</u>
Increase from previously approved Letter Proposal dated February 17, 2022. \$ <u>69,317</u>	Contract time approved in Letter Proposal dated February 17, 2022: Substantial Completion: <u>December 31, 2022</u> Ready for final payment: <u>December 31, 2022</u>
Contract Price prior to this Change Order: \$ <u>81,317</u>	Contract Times prior to this Change Order: Substantial Completion: <u>No change</u> Ready for final payment: _____
Increase this Change Order: \$ <u>10,063</u>	No change this Change Order: Substantial Completion: <u>No change</u> Ready for final payment: <u>No change</u>
Contract Price incorporating this Change Order: \$ <u>91,380</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>December 31, 2022</u> Ready for final payment: <u>March 31, 2023</u>

Recommended by Engineer

Accepted by Contractor

By:



Title:	<u>Sr. Project Manager</u>	<u></u>
Date:	<u></u>	<u></u>
	<u>Authorized by Owner</u>	<u>Approved by Funding Agency (if applicable)</u>
By:	<u></u>	<u></u>
Title:	<u></u>	<u></u>
Date:	<u></u>	<u></u>