

**AMENDMENT NO.2 TO A-7654**

**GRANT CREEK LIFT STATION REPLACEMENT PROJECT**

**City of Missoula Project No.: 2018-050**

**Morrison-Maierle Project No.: 1657.052-00**

**July 21, 2021**

**SCOPE OF SERVICES**

**Background.** The City of Missoula is in the process of rehabilitating, replacing or bypassing the aging lift stations throughout its wastewater collection system. A majority of the existing lift stations were constructed in a wet well/dry pit configuration where the wastewater pumps are located below-grade in a metal enclosure. The Grant Creek Lift Station was evaluated in the 2011 Airport Interceptor Sewer Design Report with the alternative of abandoning the station by extending gravity sewer across West Broadway, Montana Rail Link right-of-way and Grant Creek.

In 2019, the City completed a more detailed evaluation of the cost effectiveness of rehabilitating the existing lift stations of Grant Creek and Momont #2 or abandoning them and redirecting the flow to new gravity mains. The evaluation completed a present worth analysis that showed that abandoning the lift stations and installing new gravity mains was the more cost-effective approach over the long term.

The City wishes to pursue this design approach and construct a new gravity main and decommission the existing Grant Creek lift station. A future improvement that will be necessary in order to accommodate future flow projections for this area will be the design and construction of a new gravity main to replace the Momont #2 Lift Station.

The Grant Creek Lift Station was initially constructed in 1980 as part of the Grant Creek Center Subdivision and SID #472. The lift station is a wet pit / dry pit station. The station serves tributary areas of Momont #2 Lift Station and gravity collection along Expressway, International Way and Patterson Road. With the Grant Creek Lift Station being the most downstream lift station along the Expressway to the Wye tributary area, improvements are needed to accommodate growth and upstream capacity improvements recently completed and/or planned in the Wye and Reserve Street areas.

The following scope of service and associated fee estimate include the engineering tasks necessary to develop construction documents for the installation of new 15-inch gravity main and the abandonment of the Grant Creek Lift Station.

**Scope.** The following scope includes tasks for the construction observation and post construction services for the decommissioning of the Grant Creek Lift Station with a new 15-inch sewer main. The details of the project scope are broken down in the following tasks.

**TASK 100 – PROJECT INITIATION AND PROJECT MANAGEMENT**

- **Project Setup and Management.** This task includes the work related to overall project setup as well as execution of any contract amendments or scope changes that may arise throughout the course of the project. This task also includes project management, such as coordinating with the City on critical issues, managing activities within task budgets and monitoring project progress. All work activities and project deliverables will be reviewed for conformance with quality control requirements and project standards. Project activities will be monitored for potential changes, with an emphasis on anticipating changes whenever possible, and with the City's approval, project tasks and approach will be modified to keep the overall project within budget and on schedule.
- **Invoicing.** This task includes preparation of monthly invoices associated with the work and submission to the City in a clear and concise format that illustrates the progress to date and budget status to date.
- **Sub-Consultant Coordination.** This task includes coordination and contracting efforts for sub-consultants. A geotechnical engineer will be required to determine soil characteristics supporting trenchless installation of utility casings and confirming groundwater elevations for constructability reviews.

#### **TASK 200 – SURVEY**

- **Generate Existing Site Conditions.** Morrison-Maierle will create construction staking point and stake manholes, and mainline alignment for the project. Staking will be completed to include 2 offsets for each structure and every 50 ft along the new sewer main alignment.

#### **TASK 300 – PRELIMINARY DESIGN**

#### **TASK 400 – DESIGN**

#### **TASK 500 – BIDDING SERVICES**

#### **TASK 600 – CONSTRUCTION ADMINISTRATION**

- **Facilitate Agreement Execution.** This item includes preparation and coordination of the execution of the construction Agreement between the low Bidder and the City. Morrison-Maierle will fill-in the pertinent information on the Agreement Form and coordinate with the Contractor to execute their portion of the document, and obtain the necessary bonds and insurance. Once completed by the Contractor, Morrison-Maierle will review the Agreement package and attachments for completeness. Once the package is deemed correct, an executed contracts document package will be assembled and sent to the City for their approval and signature.
- **Pre-Construction Meeting.** This item includes preparation for and conducting a pre-construction meeting that involves the Contractor, City, and Morrison-Maierle to be held at the City of Missoula's facility for the purpose of discussing project schedule, construction materials/equipment, and construction procedures. A meeting agenda

will be prepared for the pre-construction meeting and formal meeting minutes or notes will be distributed for this meeting.

- **Submittal Review.** This item includes review of project submittals to ensure that the materials being delivered are in conformance with the design intent prior to release for fabrication, delivery to the site, or installation. It is anticipated that there will be approximately 10 submittals on the project of this size with each submittal requiring an average of 1.5-hours review time.
- **Resident Project Representative (RPR) Services.** This item includes onsite construction observation of the work on a part-time basis (20-hours per week) for the substantial completion duration of the project which is scheduled for a seven week duration. Due to the complexity of the project and the associated bypass-pumping events, tie-ins, possible night time construction activity due to working within MDT right-of-way, as well as other time-sensitive work activities, 40 additional hours of construction observation time is also budgeted to account for additional RPR coverage throughout the project duration.
- **Construction Administration.** The construction administration task includes having a project engineer available to provide contract administration. Examples of activities include: review of preliminary schedules, preparation and issuing the Notice to Proceed, responding to technical questions and RFIs, review of proposed change order items, preparation of Change Orders, review and processing of payment applications, preparation of project closeout documents such as lien releases and certificate of substantial completion. Also included is typical correspondence and coordination with the RPR, Morrison-Maierle's Project Manager, Contractor's Project Manager, City's Project Manager, MDT personnel, and other applicable agencies involved in the project.
- **Construction Progress Meetings.** This task includes preparation for and conducting construction progress meetings during the course of the project. It is anticipated that five (5) project meetings will be required during the project duration. Meeting agendas will be prepared; however, no formal meeting minutes or notes will be distributed.
- **Development Services Stage 5 – Final Construction and Inspection.** This task includes preparation and submission of the Stage 5 checklist to the City of Missoula Development Services. As part of this requirement, a final completion walkthrough will be conducted and a list of deficiencies (punch-list) will be developed. This punch-list will be documented and issued to the Owner and Contractor.

## **TASK 700 – PROJECT CLOSEOUT SERVICES**

- **Development Services Stage 6 – Documents, As-Builts and Testing.** This task includes preparation and submission of the Stage 6 checklist to the City of Missoula Development Services. The task also includes preparation of the as-built (record) drawings that will be submitted to the City with five (5) half-size sets of drawings and two (2) full-size sets of drawings being provided. In order to complete the necessary record drawing modifications, the original design drawings must be provided from the City in AutoCAD format. It is acceptable to provide these drawings unsigned and

unstamped. It is assumed that the Design Engineer's title block and format will be maintained and that a special note describing the performance of construction observation by Morrison-Maierle will be added to each drawing along with clouded notes describing as-built changes that were made during construction.

- **MDEQ Certification Letter.** Upon completion of the project, the Montana Department of Environmental Quality requires submission of record drawings as well as a statement from the Engineer of Record that the project was constructed in accordance with the approved plans and specifications. Morrison-Maierle will prepare this letter and the record drawings and submit them to the Agency to fulfill this project requirement.
- **Development Services Stage 7 - Warranty Inspection.** This task includes preparation and submission of the Stage 7 checklist to the City of Missoula Development Services. To complete this task, a warranty walkthrough is required prior to the expiration of the 2-year warranty period that is required on all new construction. At approximately 22 months after substantial completion, Morrison-Maierle will schedule and conduct a site inspection with the Contractor and City staff to review any deficiencies. A list of deficiencies will be prepared that the Contractor shall address prior to the completion of the warranty period.

#### **TASK 900 – ADDITIONAL SERVICES UPON AUTHORIZATION OF CITY**

- **Additional Services.** Morrison-Maierle is available to provide additional services that may arise as part of the Work. If the City identifies additional or unknown tasks as necessary for project completion, these services would be completed on a time and materials basis with prior authorization for the City project manager. For the purpose of the fee estimated, additional services are budgeted at 5% of the total engineering fee.

#### **WORK PRODUCTS:**

- **Daily inspection reports**
  - **Site photos when onsite**
  - **Construction progress summary**
- **Submittal review records**
- **Record of testing results**
- **Submittal for Development Services Stage 5**
- **Submittal for Development Services Stage 6**
- **Record drawings**
- **MDEQ certification**
- **22 month post construction inspection and report**
  - **Submittal for Development Services Stage 7**

#### **CITY RESPONSIBILITIES**

- **Provide part time onsite observation to support the project**
- **Attend construction progress meetings, bi-weekly.**

EXHIBIT A  
 GRANT CREEK LIFT STATION REPLACEMENT PROJECT - AMENDMENT NO.2  
 CITY OF MISSOULA, MONTANA  
 ENGINEERING FEE ESTIMATE - CONSTRUCTION ADMINISTRATION  
 DATE: July 21, 2021

TASK DESCRIPTION	PROJECT MANAGER	CONSTRUCTION ENGINEER	PROFESSIONAL LAND SURVEYOR	SURVEY TECH	SURVEY CREW	RPR	CLERICAL	TOTAL HOURS	TOTAL COST
<b>100 Project Initiation and Project Management</b>									
Project Setup and Management	2							2	
Invoicing	4							4	
Sub-Consultant Coordination	2	2						4	
<i>Subtotal</i>	8	2	0	0	0	0	0	10	\$1,510
<b>200 Survey - Construction Staking</b>									
Generate Staking Data			2	4				6	
Construction Staking			2		20			22	
<i>Subtotal</i>	0	0	4	4	20	0	0	28	\$4,316
<b>600 Construction Administration</b>									
Quality Control Testing - Allwest						4		4	
Submittal Review	1	15						16	
Resident Project Representative (80 Calendar Days, 58 working day with 10% contingency)						260		260	
Construction Progress Meetings		10				5		15	
Stage 5 Checklist		4				4		8	
<i>Subtotal</i>	1	29	0	0	0	269	0	303	\$42,767
<b>700 Project Closeout Services</b>									
Record Drawings MDEQ Certification	1	4				8		13	
Development Services Stage 6		4				8	2	14	
Development Services Stage 7		8					2	10	
<i>Subtotal</i>	1	16	0	0	0	16	4	37	\$5,029
<b>900 Additional Services</b>									
901 Additional Services (Only use with City Authorization)								0	
<i>Subtotal</i>	0	0	0	0	0	0	0	0	\$2,800
TOTAL HOURS REQUIRED	10	47	4	4	20	285	4	378	
HOURLY LABOR RATE	\$153	\$143	\$163	\$116	\$160	\$143	\$75		
TOTAL COST OF LABOR	\$1,530	\$6,721	\$652	\$464	\$3,200	\$40,755	\$300		\$56,422
EXPENSES (SEE DETAIL BELOW)									\$7,042
<b>ESTIMATED TOTAL ENGINEERING FEE (ROUNDED)</b>									<b>\$63,500</b>

## EXPENSE DETAIL

	UNITS	QTY	UNIT COST	TOTAL COST
Engineer Vehicle Mileage	miles	580	\$0.67	\$389
RPR Vehicle Mileage	days	0	\$20.00	\$0
Geotechnical Subcontract (Construction)	lump sum	1	\$6,153.40	\$6,153
MDEQ Review Fees	lump sum	1		\$0
Agency Permitting Fees	lump sum	1		\$0
MRL Permit Fees + Safety Compliance	lump sum	1		\$0
Miscellaneous Expenses (meals, printing, full-size drawings, etc.)	lump sum	1	\$500.00	\$500
<b>TOTAL EXPENSES</b>				<b>\$7,042</b>



March 9, 2021

Mr. Dom Goble  
Morrison-Maierle  
1055 Mount Ave  
Missoula, MT 59801

**RE: Grant Creek Sewer Collection System Improvements  
Missoula, Montana  
ALLWEST Proposal No. 721-018P**

Dear Mr. Goble,

**ALLWEST** is pleased to provide you with the following cost estimate for construction materials testing services for the Grant Creek sewer collection system improvements project in Missoula, Montana. This cost estimate is based on our review of project plans and specifications. Based on a review of the available information, we are confident our firm will provide the services in a cost effective, timely, and professional manner. This cost estimate summarizes our unit prices and our estimated fees to provide our services.

## **PROJECT DESCRIPTION**

ALLWEST has reviewed the project bid plans and specifications provided by Morrison-Maierle. The project generally consists of demolition of the existing lift station dry pit and ancillary equipment, bypass pumping and temporary piping of wastewater flows during construction, extending existing sewer main including installing PVC sewer main, steel casing, manholes, and connecting to existing manhole(s).

We propose to provide construction materials testing services on a periodic, on-call basis. Testing will generally be performed at the frequencies indicated in the project specifications and/or assumptions discussed in our cost estimate below.

Depending on actual conditions encountered or created during construction, some periodic supervision by our Project Manager or Construction Services Supervisor may be necessary.

## QUALIFICATIONS AND PERSONNEL

**ALLWEST** employs a staff of qualified engineers, inspectors, and technicians in our five offices located in Hayden, Lewiston, Meridian, Idaho, Spokane Valley, Washington, and Missoula, Montana. Our offices employ ICC certified technicians and inspectors. Additionally, our inspectors and technicians maintain WAQTC and ACI certifications. We also provide Non-Destructive Testing (NDT) to Level III ASNT practices.

## REPORTING

**ALLWEST** has assigned Mr. Lowell F. Klocke, CET as the Construction Services Supervisor for this project. Mr. Klocke will be responsible for overseeing personnel during testing and will oversee scheduling, reviewing results, and reporting to appropriate representatives.

After each test and prior to our departure from the job site, **ALLWEST** can leave a copy of our daily field report on site if requested. Reports will be reviewed and sent to the project manager on a weekly basis. Reports will be sent by e-mail.

## SCOPE OF SERVICES

**ALLWEST** will provide experienced certified testing professionals for testing services. Services will be performed on a time and expense basis. Our scope of services will include the following items:

### Earthwork Testing:

**ALLWEST** will provide an engineering technician to perform density tests on fill, backfill, and base. Our testing services will include the following:

- Density tests on trench backfills, site fills, backfills, and base course gravels using a nuclear densometer.
- Compaction testing will be performed in general accordance with the frequencies established in the specifications, MPWSS Section 01400 as modified by the City of Missoula, and/or project geotechnical report.



## ESTIMATED COSTS

We propose to provide testing services on a periodic, on-call basis as scheduled by the City of Missoula or their designated representative. Our estimate is based upon time and materials for an assumed project duration as detailed in the attached Cost Estimate. If assumed quantities or frequencies change, a corresponding change in price would occur. Our estimated not-to-exceed fee without additional authorization is **\$5,595**.

Standard labor rates are based upon an 8-hour workday between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday. Overtime for labor services provided before 7:00 a.m., after 5:00 p.m., over 8-hours, or on Saturdays will be charged at 1.5 times the standard labor rate. Overtime for labor services provided on Sundays or holidays will be charged at 2.0 times the standard labor rate. **ALLWEST** will invoice on a time and materials basis. Services not shown in the table will be invoiced at unit rates on our current schedule of charges.

We have not included costs for on-site safety meetings, security clearances and/or special site access protocols. Our personnel will have Level D personal protective equipment. We wish to point out that the above testing program is only an estimate based on available information regarding the construction. The final cost will depend on the construction schedule and the actual services performed. We also wish to note that the above testing program does not include consulting or retesting. These or other services can be furnished in accordance with our current schedule of charges.

## REMARKS

We appreciate the opportunity to submit this cost estimate, and we look forward to serving your construction materials testing needs. If you have any questions or need additional information, please do not hesitate to call me at (406) 203-9494 or James Thomasson, P.E. at (208) 819-0904.

Sincerely,

**ALLWEST**



Lowell F. Klocke, CET  
Construction Services Supervisor



James Thomasson, P.E.  
Missoula Area Manager







## Cost Estimate for Construction Materials Testing Services

**Table 1. Hourly rates, unit prices, and trip charges**

**Scope:** Compaction testing, and associated laboratory testing as directed by client or their on-site representative.

Proposal: 721-018P  
 Date: March 9, 2021  
 Description: Grant Creek Sewer Collection System Improvements  
 Client: Morrison-Maierle, Inc.

### Fieldwork

#### Compaction Testing - per trip

Technician	2 hr. @ \$ 65.00 / hr. \$	130.00
Nuclear Densometer (daily charge)	1 ea. @ \$ 30.00 / ea. \$	30.00
Vehicle Mileage	5 mi @ \$ 0.70 / mi \$	3.50
Reports-PM (technical review)	0.25 hr. @ \$ 90.00 / hr. \$	22.50
Reports-SPA (review + distribution)	0.25 hr. @ \$ 55.00 / hr. \$	13.75
(Includes mob/demob, nuclear density gauge, 1 to 1.25-hour(s) on-site to perform 2 to 3 tests, reports)	<b>Subtotal</b>	<b>\$ 199.75</b>

#### Laboratory Testing

Proctor (AASHTO T-99)	2 ea. @ \$ 230.00 / ea. \$	460.00
Sieve Analysis (T27/T11 Procedure A, entire sample)		
1½" through No. 200	1 ea. @ \$ 110.00 / ea. \$	110.00
Atterberg Limits (AASHTO T89/T90)	1 ea. @ \$ 100.00 / ea. \$	100.00

*Overtime rates (1.5 times the standard labor rate) apply after 8 hours, before 7:00 a.m., after 5:00 p.m., and all day Saturday. Overtime time rates (2.0 times the standard labor rate) apply on Sundays and holidays.*

## Table 2: Total Estimated Project Cost

### Compaction Testing

#### Utilities-Sewer

15" Sewer Main (pipe bedding/trench bkfl).	9	tr. @	\$ 199.75 / tr.	\$ 1,797.75
Manholes	10	tr. @	\$ 199.75 / tr.	\$ 1,997.50
Bore Pits	4	tr. @	\$ 199.75 / tr.	\$ 799.00
Extra tech. time during pit backfilling.	2	hr. @	\$ 65.00 / hr.	\$ 130.00
<b>Subtotal</b>				<b>\$ 4,724.25</b>

Laboratory Testing (soils) 1 ea. @ \$ 670.00 / ea. \$ **670.00**

Project Contingency, set up, supervision 1 ea. @ \$ 200.00 / ea. \$ **200.00**

(Project Manager \$90 per/hr., Senior Engineer \$135 per/hr.  
 Project Assistant \$55 per/hr.) **TOTAL \$ 5,594.25**

Notes: The above estimate is based on the following conditions:

**Compaction Testing:** Testing frequency per MPWSS section 01400, as modified by City of Missoula. Subbase & Base Course Proctors will be provided by gravel supplier. Tests on some of the manholes may be combined in same trips on main line i.e., manhole installation that may be occurring at same time of main line installation. Samples (if applicable) of pipe bedding, sub base, and base course gravels to be obtained from on-site stockpiles while performing other services on site.

**Laboratory Testing:** MPWSS section 01400, as modified by the City of Missoula, requires one sieve test on a field sample of each sub base and base course gravel materials. In addition, one Atterberg Limit test on a field sample of pipe bedding material.

**General:** We have not included costs for on-site safety meetings, security clearances and/or special site access protocols. We have assumed contractor will provide safe access to utility trench excavation for testing of backfill by providing OSHA approved slopes and/or trench boxes. Our personnel will have LEVEL D personal protective equipment. We wish to point out that the above testing program is only an estimate based on available information with regard to the construction. The final cost will depend on the construction schedule and the actual services performed. We also wish to note that the above testing program does not include consulting or retesting. These or other services can be furnished in accordance with our current schedule of charges.