



Consulting Scope of Services & Cost Estimate

PROJECT NAME: Missoula Water - East Pine Street Water Main Replacement (TLI #19-5466)			\$70	\$90	\$94	\$102	\$132	\$144	\$144	\$110	\$170	DATE:	September 18, 2019	
100 Series - Preliminary Project Assessment and Planning			Admin	CAD	Technician	Production	Project Manager	Senior Staff		Survey Crew		Consulting Cost Estimate		
Item No.	Description	Scope		Lead Drafter	EI/Other	PE/EI	PE	PE	PLS	1 Man	2 Man	TLI Services	Direct Expenses	Agency Review Fees
100	Project Management	TLI project meetings, schedule, and project coordination associated with this portion of work.					3					\$ 396.00		
107	Pre-Design Meeting with Client	Project Manager and select team members will meet with the Client to discuss project goals and project coordination. Initial meeting with Missoula Water to review as-builts of the main plus service ditch cards and discuss tie in options. Review preliminary survey research.				6	2					\$ 876.00		
119	Review Right-of-Way, Plats & COS's	Time included to research the status of the adjacent right of ways (ROWs). Time included to research at Records Room concerning ROW. Time included for obtaining any old mapping, if available, which will contain some ROW information. Assumes any available mapping will be provided with all electronic control and that it covers only the property at this time. Assumes ROW will not be determined to be exact as improvements will take place within the street.							3			\$ 432.00		
Series 100 Total			0	0	0	6	5	0	3	0	0	\$ 1,704.00	\$ -	\$ -
200 Series - Field Work & Surveying			Admin	CAD	Technician	Production	Project Manager	Senior Staff		Survey Crew		TLI Services	Direct Expenses	Agency Review Fees
200	Project Management	TLI project meetings, schedule, and project coordination associated with this portion of work.					2					\$ 264.00		
202	General Site Visit	Engineering staff member to walk site to get general understanding of topography and existing features. Become familiar with the previously unidentified potential challenges to the project and take photos of the site. Assumes time included to research and dip sewer mains in the project area.			2	4	1					\$ 728.00		
241	Limited R/W, Control & Utility/Topographic Mapping	TLI will request a utility locate five business days prior to the survey crew being on site. The visible, above ground utilities and respective underground utility locations will be tied by the survey crew for future placement on to the site map. Time included for a drafter to reduce the mapping into a site map. TLI survey crews will visit the site and ties structures, improvements, cultural features and ground elevations sufficient to create an accurate map of the site. Contours will be generated at one-foot intervals based upon the collected data, creating a surface suitable for design. Cultural features include, but are not limited to: mail boxes, utility lines, fences, power poles, wells, pathways, driveways and signs. Mapping will be completed and referenced to the Montana State Plane coordinate system and the vertical datum will be referenced to NAVD88. Survey control will be placed at locations outside of the proposed construction area to be used for future construction layout. Survey ties will be need to existing survey monumentation in the area in order to depict the approximate R/W limits in relation to the mapping and future design.	2	14			4		5	30	6	\$ 6,968.00	\$ 400.00	
256	Utility Exploration	In coordination with Knife River, if pot holing of utilities will be necessary, Knife River can complete this at a rate of \$190/HR. No time included at this time, and a budget amendment would be necessary if this is required.										\$ -		
Series 200 Total			2	14	2	4	7	0	5	30	6	\$ 7,960.00	\$ 400.00	\$ -
500 Series - MDEQ: Applications, Sewer Designs; Water Designs; Subdivision Drainage Design			Admin	CAD	Technician	Production	Project Manager	Senior Staff		Survey Crew		TLI Services	Direct Expenses	Agency Review Fees
500	Project Management	TLI project meetings, schedule, and project coordination associated with this portion of work.					5					\$ 660.00		
575	DEQ 1 Water System, Report - Exhibits	Develop the water system collection maps for this vicinity and gather hydrant test data. Assumes that Missoula Water will provide the hydrant test data to TLI as needed.			4							\$ 376.00		
577	DEQ 1 Water System, Report - Produce	Given that the involved parties are familiar with this type of water main extension work, the MDEQ Certified Checklist for water mains will be used. This checklist requires a thorough review of the plans against MDEQ's Circular DEQ-1 for compliance. In addition, a simple design report will be prepared in accordance with Circular DEQ-1. This includes getting certification from the Client that they will retain a PE to certify the improvements and review by the governing body's Engineering staff for the main extension plans. Assumes there will be one Deviation request.			4	2						\$ 580.00		\$ 200.00

869	Water Main & Services Construction Staking	Survey crew will provide stakes for the water main alignment and appurtenances per the approved design plans. Assumes stakes will be needed at 25 foot intervals along station, and at beginning and end of pipe, connections, horizontal or vertical bend, valves, tees, blow offs, air reliefs, hydrants, and the location of the water service connections at the main. Stakes will be provided at offsets and assumes that work can be completed in one visit. Crew will collect "as-staked" information for verification of stake accuracy. Assumes two blocks will be staked at a time, so assumes 2 trips total.	1				4		2		12			\$ 2,926.00	\$ 200.00	
871	Construction Inspection and Material Testing	TLI will provide construction oversight in order to ensure Contractor is completing project in substantial compliance with the Plans and Specifications. TLI will sub consult with a local geotechnical engineering and material testing firm to complete Client's Quality Assurance testing. Sub consulting fees will be billed under the TLI contract as a reimbursable expense. Assumes asphalt testing on patch back will occur on this project. Inspections will be documented and included in final close-out documents for project. Assumes no more than 8 weeks from start to finish for the main extension and service connections including testing. Inspections budgeted at two visits per day during the 8 week construction period. Reimbursable expense included for bacteria testing.			160	20	12							\$ 18,664.00	\$ 7,000.00	
875	Certificate of Substantial Completion and Final Walkthrough	TLI will process Substantial Completion form at request of Contractor. TLI will then coordinate a preliminary final walkthrough with Client; to establish date of substantial completion. Upon completion of any punch list items a final walkthrough with Client and Contractor will be completed for project acceptance.			4		2							\$ 640.00		
Series 800 Total			1	0	216	37	42	0	4	0	12			\$ 32,308.00	\$ 7,200.00	\$ -
900 Series - Final Project Documentation			Admin	CAD	Technician	Production	Project Manager	Senior Staff		Survey Crew		TLI Services	Direct Expenses	Agency Review Fees		
911	Construction As-Built - Water	TLI will utilize field notes and photos to prepare as-built plans for certification of the water main replacement.			12	2	1							\$ 1,464.00		
914	Construction Certifications - Water	TLI will assemble the construction plans, photos, testing results, submittals and a short summary report with the construction as-built plans for submittal to DEQ for certification of the project. Copy expenses included as a reimbursable expense.	1	4	16	2	1							\$ 2,270.00		
Series 900 Total			1	4	28	4	2	0	0	0	0			\$ 3,734.00	\$ -	\$ -

Project Summary	Admin	Lead Drafter	Technician	Production	Project Manager	Senior Staff		Survey Crew		TLI Services	Direct Expenses	Agency Review Fees
			EI/Other	PE/EI	PE	PE	PLS	GPS	Total Station			
Item No. - Description												
100 Series - Preliminary Project Assessment and Planning	0	0	0	6	5	0	3	0	0	\$ 1,704.00	\$ -	\$ -
200 Series - Field Work & Surveying	2	14	2	4	7	0	5	30	6	\$ 7,960.00	\$ 400.00	\$ -
500 Series - MDEQ: Applications, Sewer Designs; Water Designs; Subdivision Drainage Design	2	4	72	8	11	4	0	0	0	\$ 10,112.00	\$ -	\$ 900.00
800 Series - Construction Administration, Inspections, and Staking	1	0	216	37	42	0	4	0	12	\$ 32,308.00	\$ 7,200.00	\$ -
900 Series - Final Project Documentation	1	4	28	4	2	0	0	0	0	\$ 3,734.00	\$ -	\$ -
1000 Series - 5% Additional Services - TBD By City's Project Manager										\$ 3,200.00		
Total Consulting and Reimbursable to Obtain Approvals	6	22	318	59	67	4	12	30	18	\$ 59,018.00	\$ 7,600.00	\$ 900.00
Total Estimate including Reimbursable											\$67,518.00	